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Fortnightly Review

Propaganda

THE loss of confidence in governmental leadership in fostering aviation development in the U. S. is profound.

We sense the first real political battle brewing on this subject in fear-tensed Washington.

The politicians of the Department of Commerce and the Post Office Department give every indication of being worried. Propaganda is being spread hastily among the scheduled airlines that all will be happy about policies and plans which the government will announce shortly.

Some indefinite news releases are being fed out as a part of the propaganda program. Word is being passed around that old inadequate legislative bills are being rewritten on Pennsylvania Avenue at the opposite end from the Capitol. Patience, cool deliberation, study, are being urged—but there seems to be little patience among airline people as they remember the official lethargy during the long years since the temporary and vindictive Air Mail Act of 1934 was enacted.

And with the typhoon of general business fear hitting Washington with terrific force, with Senate leaders admitting that they can't get the votes for the governmental reorganization plan, things are in the sort of muddle that can help aviation get the legislation it needs for constructive advance.

The smart airline people know this and with aviation's public are entrenching for a fight. The government's propaganda against the McCarran-Lea plan is only giving jitters to a few people in aviation who are in the habit of expecting unearned compensation from the Post Office Department and who live in

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Record Adv. Campaign for Cub; Goal of 3,000 Sales in 1938

MAYORS REQUEST U. S. AIRPORT AID

Col. J. M. Johnson Advocates National Plan; All Officials Urge Federal Aid

Federally exercised authority in the construction of necessary airport facilities throughout the United States was advocated by Col. J. M. Johnson, Assistant Secretary of Commerce, speaking before the United States Conference of Mayors in Washington on Nov. 15.

Col. Johnson spoke at the afternoon session, the subject of which was, "The Municipal Airport Problem." Other scheduled speakers were Harlee Branch, Second Assistant Postmaster General; Frank Couzens, Mayor of Detroit, and R. E. Allen, Mayor of Augusta, Ga. Mayor Meyer C. Ellenstein of Newark presided.

"The cold fact staring us in the face is the realization that within the next 12 months there will be mammoth transport plans in the air which, in all probability, cannot satisfactorily use more than five or six, at most, of the airports in this country in their present condition," stated Col. Johnson. He pointed out that the new four-motored, 40-passenger planes

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On To Miami

As this issue went to press some 200 light airplanes were preparing to take off on November 27 from various parts of the country in a series of aerial convoys to the 10th Annual All American Air Maneuvers in Miami Dec. 2-5. The aerial cavalcade this year was expected to be the largest in history, with some fifty cities to be visited en route.

The Taylor Aircraft Company, the Aeronautical Corporation of America and the Taylor-Young Company were all sponsoring convoys, each planning to join at Orlando, Fla. not later than Nov. 30.

Many planned to attend the regional planning conference of the National Aeronautic Association in Tampa Nov. 27-29, flying to Orlando and thence to Miami in the Bernarr Macfadden Planned Flight Contest. Cooperating in the aerial convoys was Major Al Williams, of the Gulf Oil Corp.

Plans were all made for the Miami maneuvers, expected to draw record crowds, while state aviation officials from coast to coast were preparing to begin their annual sessions in Miami Dec. 1 for a three-day convention. Many other aviation events were planned in Florida starting Nov. 27 and concluding Dec. 5.

Ten Big-time Mags to be Used in \$50,000 Budget; Name is Changed to Piper Aircraft Co.

WITH a production schedule for 1938 of 3,000 Cub airplanes—more planes than the total production of aircraft in the U. S. for almost every year in the industry's history—the Taylor Aircraft Company has announced the largest advertising program ever run by any airplane manufacturer.

Coinciding with release of plans for mass selling of airplanes through national publications, the company has also announced the change in name from the Taylor Aircraft Company to the Piper Aircraft Company. Ever since the withdrawal of C. G. Taylor some time ago, the company has been getting away from the name Taylor Cub which had become a by-word in lightplane aviation. The new company is named for W. T. Piper, chairman of the board and secretary and treasurer, and the word Cub is to be emphasized in all advertising.

The ambitious advertising program was announced by M. S. Hutchins, president of the Hutchins Advertising Company, Rochester, N. Y., at the three-day meeting of Cub distributors at the new plant of the company in Lock Haven, Pa., on November 9 and 10. Distributors were present from all parts of the country.

The new program marks a new phase of flying. It is designed to reach the so-called "average public" through the medium of nationally-distributed popular magazines. The entire advertising budget is understood to be in the neighborhood of \$50,000.

Twenty-one national and aviation publications are scheduled to receive monthly or bi-monthly advertising schedules, in all-size advertisements, including full pages.

Advertising Schedules

The 1938 list includes the *Saturday Evening Post*, *Collier's*, *Life*, *Time*, *Country Gentleman*, *Esquire*, *Field and Stream*, *Outdoor Life*, *Popular Mechanics*, *Popular Science*, *Aero Digest*, *Aviation*, *Popular Aviation*, *Sportsman Pilot*, *AMERICAN AVIATION*, *Western Flying*, *The Pilot* and *Southern Flight*.

The advertising theme will be: "Now for only \$425 down you get a Cub and learn to fly. A regular course of flying instruction free."

Statistically, the program will mean some 69,682,320 Cub messages.

P. O. In Surprise Move; Asks For N. Y. - Bermuda Air Mail Bids

In a surprise move without benefit of publicity, the Post Office Department quietly advertised for bids Nov. 11 for the carriage of air mail between New York and Bermuda. Bids are to be opened at 12 o'clock noon January 15 for carrying the mails by aircraft during a term of three years beginning at a date optional with the contractor but not later than six months from the date of the award of contract.

The advertisements were out over ten days before aviation circles in Washington were aware of their existence.

The contract will be known as Foreign Air Mail Route No. 17, from New York to Hamilton, Bermuda, and return, with provisions that service may be performed from Baltimore,

Norfolk or Charleston, S. C., when weather conditions render it necessary.

According to the advertisement, "the frequency of service to be performed hereunder shall be approximately once a week and as much oftener as the contractor's planes may be operated on this route; provided that the service shall not include the carrying of mails between New York and Bermuda on planes obligated to carry the mails between the United States and Bermuda on a trans-Atlantic route, and provided further that the service may be reduced or suspended when mails shall be carried between the United States and Bermuda by planes on a through route between the United States and Europe via Bermuda."

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The 50 distributors attending the meeting heard the program outlined in detail, including plans for Cub convoys, airplane shows, direct mail campaigns, dealer newspaper advertising, and airport promotions. Samples of advertising and promotion materials were exhibited.

The free course of flying instruction is to be an integral part of the 1938 Cub campaign. The down-payment of \$425 is expected to play an important part in the public appeal, and easy monthly payments have been arranged for. According to Ted V. Weld, president of the company, the new program is expected to make it possible for many to own planes who now rent them at local airports. Weld expects the plan to open up a large new market for private airplanes and also to vastly increase the percentage of student pilots who will earn private fliers' licenses.

The 1938 Cub sells for \$1,270 F.A.F. Lock Haven Pa. More than 25 miles are claimed per gallon of gas and 350 miles to a quart of oil, making the cost of operation less than that of a low-priced automobile.

Has Led Field

"For several years the sale of Cub airplanes has far outstripped that of any other airplane in the world," Mr. Hutchins said. "For instance, during the years 1935, 1936 and 1937, more than one-third of all planes sold—with the exception of military planes—were Cubs manufactured by the Taylor Aircraft Co. This record was made in spite of the disastrous fire in March, 1937, which slowed up production for several months.

"All of the magazine advertisements will carry a coupon bearing the manufacturer's address, for the free illustrated folder on the new 1938 Cub and details on the free course of flying instruction. Inquiries will be answered by the factory and immediately forwarded to the Cub distributors who will turn them over to their Cub dealers. Cub dealers will follow through with a free flight demonstration offer. The dealer newspaper advertisements and direct mail advertising will stress the 'free demonstration' as well as the '\$425 down' and 'free course of flying instruction' features."

Those Present

Among the distributors attending the Lock Haven meetings were J. F. Lanier, Southern Air Service, Memphis; Wink Kratz, St. Louis Flying Service; L. L. Ruppert, Muskogee, Okla.; E. H. Brokenbrough, Camel City Flying Service, Winston Salem, N. C.; Delbert Clayton, Davenport, Ia.; E. P. Jacoby, Sterling, Ill.; Clyde E. Brayton, St. Louis; Joe Garside, and E. W. Wiggins, E. W. Wiggins Airways, Providence, R. I.; Bill Sranislaw, Milwaukee; Neil McCray, Erie, Pa.; Harold Brown, Red Bank, N. J.; Albert Pinella, Utica, N. Y.; Glenn Barr, Detroit; R. L. Gibson, Cub Aircraft Ltd., Hamilton, Ont.; Harvey Martin, Aircraft Associates, Long Beach, Calif.; Bill McGalliard, Virginia; Harry Schaeffer, Minneapolis; Sam Randall, Middletown, N. Y.; P. H. Hebert, San Antonio; D. H. Hollowell, Continental Motors, Detroit; Ike Vermilya, Cincinnati.

Also, Ray Hylan, Rochester, N. Y.; Lou Foote, Dallas; Durby Frye, Muncie, Ind.; W. H. Marden, Waterville, Me.; A. B. Bennett, Hightstown, N. J.; R. D. Hicks, Continental Motors; Jack Hedegard, Cub Aircraft Ltd., Copenhagen, Denmark; Paul Knorr, Bloomsburg, Pa.; Sam Bgony, Bloomsburg; A. M. Brown, Edo Aircraft Co.; Phil Meinke, Willoughby, O.; Dick Brockway, Willoughby, O.; A. C. Tufts, Chicago; L. G. Mason, Atlanta, Ga.; R. N. Jonas, Cub Sales, South America;

Larry Larsen, Cub Distributor, Alaska; John J. Kinson, Washington, D. C.; and J. K. Russell Smith, Wilkes-Barre, Pa.

On the program were W. P. Piper, Ted Weld, W. B. St. John, Findlay Estlick, Max Booke, Paul Weld and Bill Strokmeier, all of the Taylor company; William A. Schlegel of Switlik Parachute and Equipment Co.; Cy Caldwell of *Aero Digest*; M. S. Hutchins, and Fred Bremier, research department, The Curtis Publishing Company, Philadelphia.

AIRPORTS

(Continued from page 1)

cannot be expected to have the same performance characteristics as the present transports and consequently will need considerably longer runways for take-offs and landings. In case of engine failure shortly after take-off, the modern transport should be able to proceed straight ahead and descend safely within the limits of the airport, he said.

"We simply must not continue to go along without a national plan based upon the sound ideas of all the interests concerned with the progress of civil aviation," Col. Johnson remarked. "If our airport system is, at last, to be rationally planned, plainly the first thing to do is to gather all the vital facts about our airports as they now exist."

Second Assistant Postmaster General Branch was not able to be present because of injuries suffered in an automobile accident. Deputy Assistant Postmaster General J. W. Cole read Mr. Branch's speech, which pointed out that 78 percent of the large terminals, 83 percent of the medium-sized terminals and 83 percent of the small terminals showed an average annual loss of from \$4,000 to \$22,000 and that all would show a loss if interest on capital investment was taken into account. The speech concluded with the statement that the airport problem will require much careful study for constructive solution.

Passage of the Dingell Bill, authorizing the federal government to share with cities the cost of improvement and maintenance of publicly owned airports to insure the safe operation of aircraft, was urged by Mayor Couzens of Detroit.

In discussing the airport problem in relation to the smaller cities, Mayor Allen of Augusta stated, "Airport aid is one of the most justifiable expenditures that the government can indulge in in assisting municipalities."

Following the scheduled speeches, an informal discussion was led by Joseph K. Carson, Mayor of Portland, Oregon. Mayor S. Wilson of Philadelphia, Mayor Frank L. Shaw of Los Angeles, and Mayor F. W. Mansfield of Boston participated in the discussion. All believed that the municipal airport problem is a federal question, that the government should aid in an airport construction program, especially in the interests of national defense, and that the taxpayers of a community should not be compelled to subsidize a governmental function.

BERMUDA

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There is some difference of opinion as to the full significance of this provision.

The rate of compensation cannot exceed \$2 per statute mile, plus a rate per pound per thousand miles or pro rata thereof for greater or less mileage for the transportation on any flight

Institute of Aero Science Honors Wright Brothers with Lecture Series

New York, Nov. 22—The Institute of the Aeronautical Sciences will celebrate the thirty-fourth anniversary of the Wright Brothers' first flights at Kitty Hawk by inaugurating in New York on Dec. 17, the first Wright Brothers Lecture in connection with its Honors Night banquet.

Prof. B. Melvill Jones, the Francis Mond Professor of Aeronautical Engineering at Cambridge University and member of the British Aeronautical Research Committee, is coming from England to give the lecture, which will be entitled, "Boundary Layer Experiments in Flight." He will give the results of his research work in flight experiments on the control of planes at low speeds and the air resistance of smooth streamlined planes.

The Daniel Guggenheim Medal will be presented to Dr. Hugo Eckener by Dr. Harvey N. Davis, president of the American Society of Mechanical Engineers. The medal will be accepted by Commander C. E. Rosendahl, U. S. N.,

as Dr. Eckner's health will not permit him to attend.

Other awards to be made include the Sylvanus Albert Reed Award for the greatest aerodynamic achievement of the year and the Lawrence Sperry Award for the greatest achievement by a young man under 30 years of age. Harry F. Guggenheim will be the toastmaster.

The following will be made honorary members of the Institute: Dr. Lyman J. Briggs, Director of the National Bureau of Standards; Rear Admiral A. B. Cook, Chief of the Bureau of Aeronautics of the Navy; Dr. Fred D. Fagg, Jr., Director of the Bureau of Air Commerce; Dr. W. R. Gregg, Chief of the U. S. Weather Bureau; Harry F. Guggenheim; Dr. G. W. Lewis, Director of Research of the National Advisory Committee for Aeronautics; and Major General O. Westover, Chief of the Army Air Corps.

On Dec. 21, Prof. Jones will repeat his lecture after a dinner to be given in his honor at California Institute of Technology in Pasadena.

Pan Am, Imperial Transfer to Balt.

Baltimore, Md., Nov. 15—Pan American Airways and Imperial Airways transferred operations from Port Washington, L. I. to Baltimore's new 360-acre municipal airport yesterday. Pan Am's Bermuda Clipper arrived from Hamilton at 3:42 p. m. Imperial's "Cavalier" had come earlier in the day from Port Washington. The regular schedule of the companies calls for four round trips to Bermuda each week.

The Bermuda Clippers are the first regular-service planes to use Baltimore's \$5,000,000 land-and-water airport. All Baltimore land plane services will be transferred to the new airport in 1938.

The airport is located on a tidewater site six miles east of the city's business district. An area of 360 acres was reclaimed from Baltimore harbor and 15,000,000 cubic yards of fill were poured into the area. Runways for landplanes and permanent buildings for public hangars and administration offices will be completed next year. Adjacent to the filled-in land, an area of water ranging from 6,000 feet to 20,000 feet is available for seaplane landings.

Pan American Airways leased a 10-acre site at the new airport in November, 1936, for one of its western terminals for trans-Atlantic service. The city is completing a modern seaplane terminal unit for the company, including ramp, loading stage and walkway, refueling devices, hangar and office building.

J. V. MARTIN SUIT

United Air Lines Moves to Dismiss Court Reserves Decision

New York, Nov. 19—United Air Lines' request to dismiss the suit of James V. Martin, airplane manufacturer, came before the Supreme Court yesterday and Justice Wasservogel reserved decision.

Martin has claimed that United conspired with 118 other corporations and individuals to monopolize the airplane industry in the United States in violation of the Anti-Trust Act, and is seeking \$25,000,000 damages.

United contended that it is not a New York corporation and that the court has no jurisdiction so far as it was concerned.

Cram Appointed

Olympia, Wash., Nov. 9—Jack Cram, flying service operator and state highway department flier, was appointed temporary manager of the Olympia Municipal Airport by the city commission today. Cram was selected on recommendation of Robert L. Carter, project engineer who directed the airport improvement program. A permanent manager will be appointed later.

SOUTHWEST CONFERENCE

March 11-12 Set for Big Aviation Planning Meetings.

Oklahoma City, Nov. 17—Stanley C. Draper, managing director of the Oklahoma City Chamber of Commerce, announced today the dates for the Southwest Aviation Planning Conference, scheduled to be held here March 11-12. The conference is being called jointly by Governor E. W. Marland of Oklahoma, and Governor J. V. Allred of Texas.

The conference announced for Amarillo, Texas, in January, will not be held until September. Texas, Oklahoma, Arkansas, and Louisiana are among the states to be represented.

3 Colgate Students Study BAC Set-Up

Three students of the Colgate University Study Group are studying the functions of the Bureau of Air Commerce as part of their school work. These students, Donald McCausland, Ernest McKay and Kenson Kennedy, have been spending two hours a day interviewing various division chiefs in the Bureau.

The Study Group is under the direction of Prof. Paul Smith Jacobsen. Eleven Colgate juniors compose the group and are studying the functions of various governmental departments in which they are particularly interested.

Functions, administration and financing of the Bureau of Air Commerce have been studied by the three students. Although they are particularly interested in this department, Prof. Jacobsen was unable to say whether they would enter aviation after graduation.

This is the first year that the BAC has been asked to cooperate with the Study Group, which has been in existence for three years.

SERVICE DELAYED

WAS Awaits Field Improvements on Cheyenne-Huron Route

Cheyenne, Nov. 17—Marvin Landes, vice president of Wyoming Air Service, stated yesterday that there is little possibility that service will be started over the airway between Cheyenne and Huron, S. D. before next March.

The airline's contract with the Post Office states that service must have begun within six months. The Bureau of Air Commerce's refusal to allow scheduled air mail flights until cities at which landings are to be made improve their fields, may make this impossible. Landes stated that he expects the Post Office to grant an extension of three months.

Rapid City, Hot Springs and Pierre, cities at which stops are to be made, have indicated that funds have been made available for the necessary improvements.

UAL WINS SUIT

Complainant Charged Company's Plane Caused Crash in Race

Portland, Ore., Nov. 18—A \$2,500 damage suit brought by Ray Schanhals against United Air Lines was recently decided in favor of the defendant by a jury in Circuit Judge Hewitt's court.

Schanhals' plane was wrecked during the pylon race sponsored by the Aero Club of Oregon, Oct. 6, 1935, at Swan Island Airport. Schanhals claimed that United's plane was permitted to take off across his path, in violation of flying rules, and that its slipstream rendered his plane unmanageable, causing him to crash into the Willamette River. Schanhals was not injured in the wreck.

NO RED LIGHTS

Les Arnold Says Colored Airways are Foul

Les Arnold, executive vice-president of Pennsylvania-Central Airlines, tells a story about a flock of south-bound ducks in connection with the new green, red and amber airways which were established Nov. 1 by the Department of Commerce.

This was the first winter the ducks had to cope with colored airways on their trip south from Canada, he relates.

"They were doing all right for awhile. They got right onto an amber airway at Cleveland and were going great guns until they smacked right up against a green airway at Pittsburgh. They didn't know what the hell to do, got all mixed up in the airway intersection, ran into each other, and we were picking up dead ducks all over the airport the whole day."

Les said the Division of Migratory Waterfowl of the Department of Agriculture has lodged a vigorous protest to the Department of Commerce for not having the airways properly marked with colors and directions.

Airport Vote Denied

Bellingham, Wash., Nov. 9—The board of county commissioners flatly refused today to place the question of sponsoring an airport project on the ballot for Dec. 4. This was a defeat for airport proponents who have been seeking county financial aid to enlarge the present field.

Russia Believes Lost Flyers Alive; Continues Search in Arctic Night

Soviet Russia's diligent search for her six lost flyers will continue indefinitely, according to K. A. Oumansky, counselor of the Russian Embassy in Washington.

Despite the fact that Sigismund Levanovsky and his five companions have been missing since August 13, Oumansky told AMERICAN AVIATION on Nov. 20 that there is every reason to believe that the men are still alive. This belief is based on the fact that radio signals, although weak and unintelligible, were received from the four-motored monoplane, apparently proving that it landed safely.

Levanovsky and his companions had been in the Arctic many times before, Oumansky stated, and knew what to do if unforeseen circumstances arose. All six men had rifles and when their supplies were exhausted they would be able to live on Polar bears and other animals. It is believed they have established a permanent camp somewhere between the North Pole and Latitude 87.

The Russian search is being conducted from Rudolph Island, 560 miles from the Pole. Four four-motored planes, in command of Ivan Chuknovsky, who rescued members of the Nobile expedition in the airship Italia some years ago, are based on an ice field atop a high hill on Rudolph Island.

Because of the long Arctic night, it is only possible to search for the flyers by moonlight. Snow and frequent fogs have proved to be the biggest handicap in the hunt.

The Soviets have recently purchased a new twin-motored Lockheed Electra, complete with skis and other winter equipment, and turned it over to Sir Hubert Wilkins, Arctic explorer, who

Aviation Calendar

Dec. 1-3—Annual Meeting National Ass'n of State Aviation Officials, Miami Biltmore, Miami.

Dec. 1-5—Florida Aviation Congress, Miami.

Dec. 2-5—10th Annual All-American Air Maneuvers, Miami.

Dec. 6-7—Department of Commerce airport conference, Washington.

Dec. 10—Annual Meeting, New York State Aviation Association, Hotel St. George, Brooklyn, 8:30 p. m.

Dec. 17—Opening of New Club, Aero Club of Oregon, Portland.

Dec. 17—Annual dinner in honor of Wright Brothers, New York City, Institute of Aeronautical Sciences.

Dec. 27-30—Annual Meeting, Institute of Aeronautical Sciences, Indianapolis.

Jan. 9-11—National Aviation Planning Conference and N. A. A. Convention, Cleveland.

Jan. 25—Annual Meeting, Manufacturers Aircraft Assn., New York City.

Jan. 28—Annual Meeting, Aeronautical Chamber of Commerce, New York City.

Jan. 28—Feb. 6—International Aircraft Show, Chicago.

Feb. 11-12—Northwest Aviation Planning Council, Vancouver, B. C.

Mar. 11-12—Southwest Aviation Planning Conference, Oklahoma City.

April 2-10—3rd Annual Pacific Aircraft and Boat Show, Los Angeles.

June 19—2nd Annual Santa Ana, Calif., Air Show.

CIVIL AIR PROBE IN GREAT BRITAIN

Conservative Member of House of Commons Charges Inefficiency, Condemns Croydon Airport

Lieutenant-Colonel A. J. Muirhead, British Under-Secretary for Air, on Nov. 17 announced that the British Air Ministry will institute a departmental inquiry into charges of inefficiency in the civilian airlines.

The announcement followed accusations made from the floor of the House of Commons by W. R. D. Perkins, Conservative backbencher and aeronautical engineer. Perkins charged that British civil aviation is rapidly coming under the control of two London financial houses. He named d'Eranglers banking house and Whitehall Securities and stated that railways also have substantial holdings.

In addition, he disputed a statement that Imperial Airways, the government's subsidized airline, was the safest in the world, disclosing the fact that an inquiry into a fatal crash showed that the company had been "cutting the supply of fuel too fine on the Mediterranean route." When Imperial pilots approach the management concerning new equipment, they are promptly dismissed, he said.

"Croydon Airport," Perkins stated, "is only fitted for a second-class Balkan state." He estimated that Imperial Airways will only carry 34 per cent of the passengers in and out of this port during 1937, compared with well over 50 percent in 1933.

"The new airway just being opened up across Canada had to be equipped with American machines," Perkins went on to say. "The South African services recently ordered 22 German machines. Australia has ordered a trial machine from America. Unless the Ministry wakes up to the seriousness of the position, British civil aircraft will lose the whole Empire market."

Government spokesmen did not attempt to answer the charges on the floor of the House. They expressed the belief that Britain's rearmament program had caused the delay in the delivery of new equipment to the airlines, and said that the government was satisfied that there had been no victimization of pilots.

The departmental inquiry will be conducted by Lord Cadman, noted engineer. He will be assisted by Sir Warren Fisher, permanent Secretary of the Treasury and head of the civil service, and Sir William Barrowclough Brown, Second Secretary of the Board of Trade. W. W. Burkett, member of the Air Ministry staff, will act as secretary of the committee.

A CONTRIBUTION

We announce special round trip winter excursion fares in the belief that we are contributing to the progress of aviation by increasing the number of air travelers.

CONTINENTAL
Air Lines, Inc.

"The Sunshine Route"
Municipal Airport, Denver

1938 Airport Directory

Grove Webster has announced that the 1938 edition of the Airport Directory which he publishes will show controlled areas around designated airports as described by the new civil air regulations. The new edition will also contain more aerial photographs of airports than ever before.

CHAMBER ENDORSES AIR LEGISLATION

Issues Strong Plea for Enactment Immediately of McCarran-Lea Air Carrier Bill

Advocating early enactment of the McCarran-Lea Air Carrier bill, the Chamber of Commerce of the United States has sent to every Association and Chamber of Commerce in the country a report of its transportation and communication department committee urging the support of local groups in securing passage of the bill by the Congress now in session.

Significant feature of the report is that membership of the committee is composed almost entirely of railroad men and industrialists. Only one airline executive, W. A. Patterson, president of United Air Lines, is represented. The report was sent to local chambers by A. N. Barber, manager of the national chamber's transportation and communication department.

"The growing importance of air transport as part of the national transportation system calls for regulatory measures based on experience with regulation of other forms of transportation—but adopted to the needs of air transport," the report said.

"Present limited federal control of air transport, exercised only through the Post Office Department's mail contracts and the safety standards and rules of Department of Commerce, does not extend to passenger and express business which now provide more than two-thirds of the revenues.

"New routes and schedules are now in fact established principally to meet passenger and express requirements and should be subject to the same tests of public convenience and necessity as are applied to interstate rail and motor transportation.

"Air mail requirements will be taken care of even more effectively than at present, as any or all planes may be required to carry mails, and airmail service and schedules will be under full supervision of the Postmaster General, who will also have authority to initiate proposals for new air mail routes. Reasonable mail pay is to be fixed by the Interstate Commerce Commission as in the case of railway pay.

"The present method of competitive bidding for air mail contracts, as evidenced by the obviously non-compensatory bids recently received, is likely to cause haphazard and inappropriate allocation of routes. The pending legislation therefore provides for granting certificates with due regard to qualifications of operators and proper allocation of new lines to existing or new systems as part of the national airline network.

"The Interstate Commerce Commission is the logical federal agency, equipped in organization and experience, to carry on the regulation of air transport as a part of the national transportation system."

Members of the committee are: Samuel T. Bledsoe, chairman, president, Atchison, Topeka & Santa Fe Railroad; E. George Butler, John G. Butler Co., Savannah, Ga.; Charles W. Chase, president, Indianapolis Railways, Inc., Indianapolis; Walter A. Frey, president, Frey & Son, Baltimore; E. J. Grimes, vice president, Cargill, Inc., Minneapolis; Arthur M. Hill, president, Atlantic Greyhound Corp., Charleston, W. Va.; H. D. Horton, president, Horton Motor Lines, Charlotte, N. C.; David H. Howie, vice president, Fiduciary Trust Co., Boston; Roger D. Lapham, president, American-Hawaiian Steamship Co., San Francisco; W. A. Patterson, president, United Air Lines;

WASHINGTON LEGISLATION

The most important aviation business in Washington this winter—legislation—has been a maze of uncertainties since the opening of the special session of Congress on November 15.

Likelihood of any action by Congress before the regular session, beginning January 1, appeared dim as this issue went to press, but at the same time it appeared almost certain that some legislation for aviation will be enacted before the close of the regular session sometime in the spring or summer.

Out of the constant flurry of rumors, plans, reports and propaganda, one fact stands out above all: the McCarran-Lea Carrier Bill which would place air transportation under the economic regulation of the Interstate Commerce Commission, is increasingly being placed in a stronger position—and this despite a planned campaign of propaganda by two Government departments designed to split the ranks of the domestic scheduled airlines.

Biggest question mark at present is the awaited recommendations of the special interdepartmental committee which presumably has the sanction of President Roosevelt. This committee, composed of six under-secretaries of cabinet departments, was established to study all pending aviation legislation. Newspaper reports, apparently inspired by certain official circles, have stated that the committee will recommend a separate aviation commission to be placed under the Department of Commerce to handle and centralize all aviation legislation.

Observers believe this is a compromise move by the Commerce and Post Office Departments to satisfy the demand for aviation legislation and yet not materially alter the present unsatisfactory situation whereby the airlines are footfalls being kicked from one agency to another. But despite these reports, it is known that the committee is split several different ways, is still "sounding out the situation," and has not arrived at any final conclusion.

The feeling in Washington is that the Administration will introduce several bills in the present session of Congress to stall any action on the McCarran-Lea bill.

Despite the fact that all of the airlines were solidly behind the McCarran-Lea bill, two airlines have switched to the Post Office-Commerce bandwagon in an inspired move to break the solidarity of the McCarran-Lea movement. This move is based on the premise that the McCarran-Lea bill "is dead" and it is known that at least one other airline was beginning to fall for the idea.

Meanwhile, supporters of the McCarran-Lea legislation continued their campaign, a campaign which is resulting in increased pressure from municipalities and chambers of commerce for

the passage of the bill. It is not believed that the Post Office-Commerce combine will be able to break the stand which the airlines as a whole have taken for this bill. Added to the McCarran-Lea support is a stronger attitude on the part of Pan American Airways, which prefers I. C. C. regulation rather than regulation by any other agency.

Probably the most outstanding factor in favor of the McCarran-Lea bill at present is the solid support of labor, represented by the American Federation of Labor, acting for its affiliate, the Air Line Pilots Association. It is a foregone conclusion that the labor vote will be able to defeat any Administrative compromise that is not satisfactory to this element.

Labor support is also solidly behind the McCarran-Crosser bill which would transfer airline safety from the Commerce Department to the I. C. C.

On November 16 Senator McCarran presided at a conference of supporters of his bill in the Senate Office Building, at which time he announced his plans for passage.

Those present were: A. P. Martin, president of the Air Line Mechanics Association; David H. Behncke and Edward G. Hamilton, Air Line Pilots Association; B. R. Sullivan, United States Chamber of Commerce; W. P. Redding and K. K. Hoyt, of the Interstate Airways Committee; F. W. Wiggins and Alton B. Sherman of the Airline Feeder System; Stanley T. Wallbank, president of the Denver Chamber of Commerce; Arthur S. Dudley, Sacramento, Calif., representing the Western Aviation Planning Conference; Leighton Rogers and Charles Parker, Aeronautical Chamber of Commerce; R. P. Rosengren, president, and Fred B. Linton, Washington representative, U. S. Junior Chamber of Commerce; W. C. Hushing, legislative representative, A. F. of L.; Col. Edgar S. Gorrell, president of the Air Transport Association; Fred L. Smith, National Aeronautic Association.

Also present were Senator Harry S. Truman of Missouri; Senator Ed. Johnson, Colorado; Senator Claude Pepper, Florida; Senator William G. McAdoo, California, and Congressman Clarence Lea of California.

Airline presidents had been invited to attend but were advised by Col. Gorrell that he would represent them.

In opening the conference, Senator McCarran said "We believe the time has arrived when the industry must speak emphatically for legislation for the welfare of the industry generally and for the welfare of the public and the welfare of the country."

All of those present expressed themselves as being wholeheartedly behind the McCarran-Lea Bill. There were several representing organizations who were not in a position to endorse the safety bill, although a majority of those attending did so.

Taylor Co. Hires Girls

Lock Haven, Penna., Nov. 16—The Taylor Aircraft Company recently hired three girls who will be trained in all phases of aircraft manufacture. They are Miss Bebe Kelley of San Antonio, Texas, Miss Alma Heflin, Seattle, Washington, and Nancy Schwartz, Kenosha, Wis. All three are pilots and Miss Kelley recently beat out 18 men pilots in an efficiency contest. More girls will be hired and next spring will tour the country in a fleet of "fiver planes."

Hendersons Plan 3d West Coast Air Show



PHIL HENDERSON the West Coast is becoming a traditional annual affair.

The 2d show was held in February, 1937, but the Henderson Brothers have decided that this date is too far in advance of sport flying and boating to warrant maximum effectiveness and appeal. The April date places the exhibits before the public just in advance of the summer season.

Arrangements for the April show will follow closely those of its two predecessors. A satisfactory landing area is adjacent to the roomy Pan Pacific Auditorium so that planes may be landed literally at the doors of the showrooms rather than being taken through streets from an airport. The floor plan will be the same as in the last show.

The Hendersons have announced that the same staff will be used again. A second meeting of the Aircraft Industries Association will be held early this month for the purpose of appointing a show committee to complete advance details for the coming show. Offices of the association are in the Pan Pacific Auditorium.

O'DONOVAN PROMOTED

Becomes General Traffic Manager of Penn-Central Airlines

C. Bedell Monro, president of Pennsylvania-Central Airlines, has announced the appointment of J. J. O'Donovan as general traffic manager succeeding W. J. Austin.

A native of Cork, Ireland, and educated at Queens College, Dublin, O'Donovan came to the U. S. in his early twenties and immediately entered aviation. He began with the Clifford Ball Company in



1927, the first to establish scheduled airline service over the Allegheny Mountains, and which was later absorbed into the PCA system. From 1930 to 1936 he served as division traffic manager for the airline at Washington, D. C. In May of this year he was transferred to Pittsburgh as assistant to the President, and on Nov. 1 assumed his new duties. His age is thirty-one years. His headquarters will be in Pittsburgh.

Army Takes Over

Tacoma, Wash., Oct. 25—Pierce County commissioners today turned over to the War Department the county airport, Tacoma Field. Under terms of the proposal, the county turns over the 960 acres of land, located adjacent to Fort Lewis military reservation, together with all improvements and buildings. Improvements to the property made by the county total \$539,947.

3 Factors Caused UAL Crash; Board Discusses Pilot Error

Newspapermen Ask Questions on Second Reason; Members Believe Woodgerd Should Have Resorted to Any of 3 Alternatives

A combination of three factors was given as the probable cause of the United Air Lines' crash near Humpy Ridge, Utah, Oct. 17, in a report made public at Secretary of Commerce Roper's press conference Nov. 17. Members of the investigation board were present at the conference and discussed the probability of pilot error.

The crash, which was the worst in airline history, resulted in the loss of the lives of 16 passengers and three members of the crew. Earl D. Woodgerd was pilot of the flight, John B. Adams, co-pilot and Miss Leah Derr, stewardess.

Members of the accident board were Miller Foster, assistant to Assistant Secretary of Commerce J. M. Johnson, chairman; B. M. Jacobs, chief, certificate and inspection division, Bureau of Air Commerce; J. W. Lankford, chief, accident analysis section, Bureau of Air Commerce; W. D. Hammond, chairman, Utah Aeronautics Commission, and J. E. Garn, Utah state aviation director.

The combination of factors which probably caused the accident was given as:

1. Static conditions encountered in the last portion of the flight, which rendered the reception of radio range signals unintelligible.
2. The continuation of the flight into mountainous country at an altitude below the higher mountains without the aid of ground visibility or radio signals to definitely identify position.
3. A change in the weather caused by the approach of an unpredicted cold front.

The position of the wreckage indicated that the plane struck the side of the mountain while traveling in normal level flight, at or near cruising speed and with both engines functioning normally. The crash occurred at an altitude of 10,261 feet.

The flight plan for the trip shows contact flying between Cheyenne and Rock Springs and intermittent instruments from Rock Springs to Salt Lake. The last report received from the plane was at 8:19 p. m. over Rock Springs. The crash occurred at approximately 9 p. m.

Weather reports inspected by the accident board show that the unexpected cold front should not have passed the scene of the accident until 11:30 p. m. However, unstable air conditions existed ahead of this cold front and the trip log of the plane shows rough air immediately prior to the accident. The flight analyzer recorded this rough air for approximately the last 10 minutes of flight.

The accident report stated that approximately 50 miles east of Knight, Utah, the flight encountered snow static which interfered with the reception of radio range signals.

As to why the pilot drifted 15 miles south of his course, the report stated: "In the opinion of the board, this change of flight path was due to drift caused by a change in wind direction, velocity or both, induced primarily by the proximity of the cold front. This drift evidently was not and could not have been reasonably anticipated by the pilot and was not recognized by

him, due to his inability to receive intelligible radio range signals or see anything on the ground by which to locate himself."

It was the second factor advanced by the board that aroused comment at Secretary Roper's press conference. Miller Foster, chairman of the board, stated that he believed the pilot could have resorted to any of three alternatives when he found himself completely out of contact with the ground: he could have ascended to an altitude higher than the highest mountains in the vicinity, where he might have encountered dangerous icing conditions; he could have sought an alternate landing field, or he could have returned to Cheyenne. Foster, Hammond and Garn were of the opinion that Woodgerd used poor judgment in not resorting to one of these alternatives.

Jacobs was the only member of the board present who did not believe the crash could be attributed directly to pilot error, stating that he considered all three factors advanced in the report caused the accident.

JOINS TWA

E. Dillon Smith Appointed Assistant to the President



Jack Frye, president of TWA, Inc., has announced the appointment of E. Dillon Smith, industrial engineer, as assistant to the president. Smith becomes one of the youngest airline executives in the business.

He has held transport pilot's, airplane and engine mechanic's, and radio operator's licenses. Prior to his association with TWA, he spent five years as a member of a New York group of consulting and industrial engineers, and also assisted in directing an industrial survey of North America.

Born in Philadelphia, he is a graduate of Iowa State College, where he received Bachelor's and Master's degrees in engineering, and holds a Doctorate from Columbia University, where he was appointed University Fellow, highest of academic graduate honors. He has held a professorship in mechanical engineering at the College of the City of New York. He is active in four honor societies, including Sigma Xi, honorary science group. His headquarters will be in Kansas City.

Germans Take Speed Record Away from U.S.

The German landplane speed record set at Augsburg, Germany, on Nov. 11, may give American engine manufacturers something to think about. Chief Pilot Wurster of the Bavarian Airplane Works flew a Messersmith racer 610.2 kilometers an hour (about 379.16 m. p. h.) to better the record of 352.388 miles made by Howard Hughes Sept. 12, 1935.

Important feature of the new record is the wide margin by which it surpassed Hughes' mark.

Wurster's plane was powered by a Daimler-Benz motor and equipped with an adjustable propeller manufactured by the Hedderheimer Copper Works at Frankfurt on the Main. Germany has not been much interested in airplane records for some time and has been behind France, Italy and the United States in the number of records held. But there are only two records that draw considerable interest from an international standpoint: altitude and speed. Germany now finds itself in the forefront by capturing what is probably the most coveted of the air records.

The record will probably not have any immediate effect on American exports, but the Germans have boasted for some time that eventually, when German production is geared to satiate national requirements, that country will go after its own export market and attempt to invade the U. S. with a line of aircraft and engines. Without doubt the new speed record adds must to German aeronautical prestige.

Jack Knight, Holder of World's Flying Record, Retires From Transport Duties

Chicago, Nov. 18—Capt. Jack Knight, one of the nation's best known airline pilots, announced today his retirement from active flying to accept a position as director of public education for United Air Lines. He has completed twenty years and 2,400,000 miles of flying with the record of more miles flown than any other pilot in the world.

Knight's last scheduled flight marked completion of his 18,000th hour of officially logged flying time. His last trip was a non-stop sleeper schedule from Denver to Chicago, the division over which Knight sixteen years ago made a famous air mail flight which brought him much national publicity.

Enlisting in the air service of the U. S. Army in 1917, he learned to fly at Ellington Field, Texas, becoming an instructor of acrobatics. After the War he took an engineering job in Chicago, but returned to flying in 1919 by joining the U. S. air mail service, flying first between New York and Chicago and then between Omaha and Cheyenne.

The feat which brought Knight nationwide attention occurred in 1921 when Congress was considering the abandonment of air mail appropriations on grounds that mail could not be flown at night and the time saved in daytime flights did not warrant the expenditure. Knight was one of seven air mail pilots who volunteered to make a continuous day and night flight across the continent to prove that if the government would make the appropriations to put in the world's first airway lighting system, air mail would serve a more useful purpose. It fell to Knight's lot to draw the night portion of the trip from Chicago, aided only by bonfires which farmers were asked to build along the route.

As a result of the demonstration, Congress made the appropriation and the New York-San Francisco airway be-

came the first lighted and improved airway in the world. When United Air Lines took over operation of the route in 1927, Knight flew the Chicago-Omaha division and later the Chicago-Denver section. Knight's headquarters will be in United's general offices in Chicago but he will cover the entire system. His work will include public representation of the company, supervision of educational programs on air transportation, and individual contacts.

To Start Building

Winnipeg, Nov. 17—Mayor F. E. Warriner announced last night that work on the new \$150,000 building at the Winnipeg Airport will be started immediately by Trans-Canada Airlines. City council has approved lease of an airport lot to the Dominion government for 20 years at a \$2,500 annual rental.



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Trip Insurance Announced For Airline Patrons; 25c for 4 Hrs.

**Air Transport Association Releases Plan Sponsored by Four
Insurance Companies Bringing Protection Rates to
Railroad and Steamship Levels**

The Air Transport Association announced Nov. 22 that four leading insurance companies will soon inaugurate trip insurance for airline passengers at the rate prevailing for trains and steamships, thus reaching a new milestone in public recognition of air transportation as a safe means of travel.

The plan gives \$5,000 coverage at a premium rate of only 25 cents for each four hours of scheduled flying time of the passenger's trip. The new rate represents a reduction as much as seventy-five percent below the former rates. The Chicago-New York policy will cost only 25 cents compared with the existing rate of \$1 and as high as \$2 on certain length schedules.

Coast-to-coast flight insurance will be \$1 instead of \$2 as it is now. All airline ticket offices will have the policies for sale.

The premium rate of 25 cents will be based upon the scheduled flying time which allows stop-overs en route and is good for seven days from the start of trip until its termination. For example, a traveler, under this policy, could fly from New York to Chicago with a six-day stopover at Pittsburgh, Detroit, Cleveland, Columbus or Buffalo, and be covered for the entire flight for 25 cents.

In case the passenger should interrupt any portion of his scheduled airline trip, the new airline trip policy will also cover the passenger in trains and steamships between the given points specified in the policy, and in automobiles operated by the airlines to and from airports.

Policies will be issued in the Fidelity and Casualty Company of New York, while the Fireman's Fund Indemnity Company of San Francisco, the Glens Falls Indemnity Company, in Glens Falls, N. Y., and the United States Guarantee Company, New York, are participating equally as members of the Associated Aviation Underwriters, through which organization the insurance was developed.

Longest Air Express Shipment in '37 Was 19,242 Mi., L. A. to Australia

Routine express shipments by sea and air from the United States have reached as high as 19,000 miles during this year, according to Penrose Scull, president of Air Express International Agency, Inc.

Commenting on a brief item in the Nov. 1 issue of AMERICAN AVIATION telling of a shipment of an airplane part from New York to Alaska, Mr. Scull submitted four examples of the wide use of air express service for long distances so far this year.

The longest was a shipment carried by TWA from Los Angeles to New York, where it was placed on the Queen Mary for Southampton, transferred to Imperial Airways and carried to Sydney, Australia, a total mileage of 19,242.

Next longest was a shipment carried by K. L. M., the Royal Dutch Airlines, from Batavia in the East Indies to London, placed on the Aquitania for New York, carried by Eastern Air Lines from New York to Miami, and by Pan American Airways from Miami to Buenos Aires—total mileage, 18,393.

Further details of the plan may be obtained direct from Dan Scarritt, underwriting manager of Associated Aviation Underwriters, 90 John Street, New York City.

"These four national insurance companies will offer this new, low air travel insurance at no greater per mile cost than scheduled surface transportation as a result of several years extensive study of air transportation, using statistics of the Bureau of Air Commerce and the National Safety Council," according to Col. Edgar S. Gorrell, president of the Air Transport Association.

ARTHUR APPOINTED

**Airport Engineer Heads Department
With Hageman-Harris**



Appointment of William E. Arthur, aeronautical engineer, as manager of its newly formed aviation department was announced Nov. 14 by Hageman-Harris Company, Inc., New

York building organization. Mr. Arthur was formerly head of the National Airport Engineering Company, and has been identified with the construction of hangars and airport facilities for many of the nation's leading airports.

Hageman-Harris is well known in the construction field, having built many well known skyscrapers and institutional buildings. The company has decided to add an aviation department because it plans "to take an important part in the building and re-building of many airports, whose facilities have been largely outmoded by the advent of the fleets of new air transports." The firm has offices also in Boston and in Canada.

The third was via Pan American from Lima, Peru, to Miami, Eastern Air Lines, Miami to New York, New York to Bremen via the Europa, and Deutsch Lufthansas and K. L. M. to Bombay, India, total mileage, 13,196.

A fourth long shipment used lighter-than-air for part of the distance. The shipment was handled by Pan American from Honolulu to San Francisco, by United to Lakehurst, N. J., by the ill-fated Hindenburg to Frankfurt, and by Deutsch Lufthansa and Imperial Airways from Frankfurt to Nairobi, British East Africa, a distance of 12,300 miles entirely by air.

"These shipments were not stunts or for publicity purposes," Mr. Scull said. "Our Air/Sea Express Service, which coordinates fast trans-Atlantic steamer sailings with the scheduled air transport operations of the European airlines to all points in Europe, Africa, India, Java, and Australia, handles hundreds of shipments each month, which average a total distance of 10,390 miles via air and water from New York."



Major Jimmy Doolittle, head of the aviation department of all of the Shell oil companies, took delivery Nov. 4 of his Seversky "Executive" which will be used by him for a series of sub-stratosphere flights between 25,000 and 30,000 feet to determine fuel consumption and reaction under high altitude conditions. Doolittle's plane is a duplicate of Frank W. Fuller Jr.'s plane that won the 1937 Bendix Trophy race, except that it has all the latest aeronautical instruments for instrument flying. Top speed of 350 miles per hour at high altitudes possibly better, is expected. He will use Shell 100 octane ethyl aviation gasoline which Shell was the first to introduce. Above photo shows Doolittle, in cockpit, talking to Col. Alexander P. de Seversky.

Fifty Airplane Exhibits Certain For Int'l Air Show At Chicago

James H. Dunbar, Jr., executive vice president of International Air Show, Inc., reports that more than fifty airplane manufacturers and allied industries have reserved space for the International Air Show to be held in the International Amphitheatre January 28 to February 6.

It is now expected that more than seventy-five airplanes will be exhibited in what appears to be the largest aircraft show ever held in this country, exceeding in size the 1937 international exhibitions in Paris and Milan.

"Practically every important American manufacturer has arranged for space," Mr. Dunbar said, "and many of them will exhibit from two to four new 1938 models. It is interesting to note that the 75 models to be exhibited will compare very favorably with the record of the automobile industry, which exhibited slightly more than 300 cars in the big Chicago show recently in the same building."

The Department of Commerce has approved a landing field in the paved parking space adjoining the amphitheatre. The field will have a runway 1,760 feet long and more than 200 feet wide. The building itself has 255,000 square feet of exhibition space. The entire main floor, including the arena, 123 feet wide and 238 feet long, has been reserved for the exhibition of planes.

A feature of the arena display will be the exhibition of four amphibian planes afloat in miniature lakes, reached by visitors over bridges. In the center of the arena will be a pylon topped by

an air beacon. The pylon will serve as a stage for daily shows and special programs. Among the organizations cooperating is the Air Transport Association which is sponsoring an educational demonstration of the ships and the radio and other equipment.

One-fourth of the entire second floor space has been set aside for exhibits of the Army and Navy and the Bureau of Air Commerce.

The City of Chicago has officially approved the show. The Chicago Aero Commission is actively supporting it and Major Reed Landis, war ace, has been designated as chairman of a committee of the Commission to cooperate in Air Show Week meetings planned by various organizations in the aviation field. A number of meetings are already scheduled.

President of the show is Jack Vilas, pioneer Chicago flyer and chairman of the Greater Chicago N.A.A. Chapter. C. R. Walgreen, drugstore operator, is chairman of the board. Maynard W. Schryver is vice president and general manager. The show is sanctioned by the Aeronautical Chamber of Commerce.

Bendix Appeals Suit

Notice of appeal to the Appellate Division of the Supreme Court has been filed by Bendix Aviation Corp. over a recent decision of the lower court which awarded judgment of \$66,868 to Henry H. Colvin and \$17,000 to Aeronautical Holdings, Ltd. Forty-five thousand shares of Bendix Aviation common stock are involved in the suit.

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Alabama Announces \$5,000,000 Long-Range Airport Program

State-Wide Plan Calls for Orderly Development of 118 Fields in 115 Cities; State Prepared for Federal Aid

The Alabama Aviation Commission completed and published a state-wide plan for the development of airports which calls for an expenditure of \$5,275,000. The long-range plan provides for the construction or further improvement of 118 fields in 115 localities in addition to a state-wide airmarking program.

The report has been released by Asa Rountree, Jr., director of airfield development on behalf of the Alabama Aviation Commission, of which Theodore Swann, of Birmingham, is chairman. Other members are: T. D. McGough, Jr., Montgomery; I. B. Rutledge, Montgomery; L. G. Mason, Montgomery and Oscar Barney, Mobile. Hester N. Smith is the commission's airport engineer.

Purpose of the program, as outlined in the report, is to serve the state with the basis for orderly airfield planning and development; to provide the state eventually with an adequate and closely connected airfield system, and in the anticipation of and preparation for Federal aid in airfield construction.

In preparing the plan, the commission took into account all factors of flying: local needs of communities, air routes (national, regional and state), airline operations, commercial flying (intra-state and interstate), and private flying.

The plan not only takes into account actual construction and improvement of landing areas, but provides also for such items as boundary and field marking, hangars, administration buildings, club houses, keeper's cottages, field lighting, paved runways and paved aprons and taxi strips.

The program does not include work on Maxwell Field and Fort McClellan, belonging to the Army, or the landing strips of the Tennessee Valley Authority at Decatur, Guntersville Dam and Wheeler Dam, but it does include fields now privately owned at Birmingham, Foley and Miller's Ferry, and fields of the Bureau of Air Commerce.

The plan is divided up into primary and secondary systems, providing priority of construction where needs are greatest. The primary system embraces localities along, or adjacent to, the principal airways across the state, which are a part of the national airways system or connect the principal towns of the state.

Up to October 15, 1937, the Alabama Works Progress Administration had released twenty-eight projects since its inception, with estimated costs of approximately \$2,228,472. Actual expenditures to that date amounted to \$1,274,146. Army and National Guard expenditures have been \$652,170 up to October 15. The commission reports that some \$200,000 in projects is now immediately pending.

Copies of the plan may be obtained by writing to Mr. Rountree in care of the Alabama Aviation Commission, Montgomery, Ala.

UAL WINS SUIT

Passenger Had Sued for Bump Received En Route

Portland, Ore., Nov. 4.—A sealed verdict in Federal District Court here today found for the defendant, United Air Lines, in the \$10,000 damage suit

brought against the line by Stanley Gearhart as the result of injuries which Gearhart claimed he suffered when a passenger plane hit an "air bump" while flying between Portland and Medford.

The case was considered important from the standpoint of airline operators because it was alleged that the plane had gone outside the established airway to give passengers a glimpse of Crater Lake. Gearhart, who said his forehead was cut, claimed the accident would not have occurred had the plane stayed on a direct line between Portland and Medford. A number of lines deviate from their direct line routes in good weather to show certain scenic attractions to passengers, Boulder Dam being one example. In the Gearhart suit the weather was established as good.

The suit has been pending some time. Last summer United refused to take Mrs. Franklin D. Roosevelt sightseeing over Crater Lake in the course of a regular passenger flight because of the suit.

Thompson Shipments Fall

November shipments of Thompson Products will be about 10 percent under October, one of the company's best months. Curtailed automobile production is responsible for the decrease. Shipments of parts to aircraft manufacturers has been holding up very well.

P. O. Orders Airlines Give 6 Mos. Notice When Changing Equipment

Harlee Branch, Second Assistant Postmaster General, has issued an order to all air mail contractors, which includes all scheduled domestic airlines, that six month notices are to be given by any airline contemplating a change of equipment which might cause the suspension of air mail service at local airports because of the inadequacy of the field.

"This suspension of air mail service on account of the condition of airports and the installation of large or high-speed airplanes which cannot operate into existing airports, is causing much disruption of air mail service, with resultant complaints from the public and from members of Congress."

Mr. Branch said in Instruction Letter 20 issued to each airline.

"While it is the desire of the Post Office Department that contractors improve their equipment from time to time, it is necessary that we also keep in mind the fact that routes were established to serve the public, and that there are other cities to be served besides those at terminal points or large intermediate points, which may be in a better position to construct large airports than the secondary cities.

"Furthermore, many communities feel that they have not had sufficient notice concerning the suspension of service, in order that they might have some opportunity to make the required improvements: In order that such complaints may be eliminated and that

there may be a uniform procedure with regard to the suspension of service on account of airport conditions, the following regulations will be observed, effective immediately."

The order states that "it will be expected that, at least six months prior to the inauguration of a new type of equipment with which operation cannot be regularly made into some airport on the designated route, the carrier will notify (a) the Second Assistant Postmaster General (b) the Director of the Bureau of Air Commerce and (c) the proper official in the city, municipality or community served.

After receipt of such notice, the P. O. Department will determine whether a hearing will be held with regard to the proposed changes. "The P. O. will not approve changes of schedule affecting the elimination of stops on account of the use of larger equipment, unless the above conditions have been complied with."

In the event of suspension of service on account of an emergency condition which could not be foreseen, such as might be brought about by unusual weather conditions, the airline is to notify immediately the local postmaster, the municipality, the assistant superintendent of the air mail service in the territory in which the airport is located, the Second Assistant Postmaster General and the Director of the Bureau of Air Commerce.

Airport Summary

Conference—Dec. 6-7

The Department of Commerce has called a two-day round-table conference on airports to be held in Washington Dec. 6 and 7. Col. J. Monroe Johnson, Assistant Secretary of Commerce, and Fred D. Fagg, Jr., Director of the Bureau of Air Commerce, have invited airline executives, aircraft manufacturers, municipalities and Post Office Department officials to join with the Bureau in facing frankly the whole problem of airports.

Mayors Ask Federal Aid

The Conference of Mayors, meeting in Washington on Nov. 15, went on record as favoring Federal aid for airport construction by adopting a resolution submitted by Mayor Frank L. Shaw of Los Angeles. It read: "Be it resolved that the United States Conference of Mayors petition the Congress of the United States to enact such legislation as is necessary and competent to provide for and authorize a permanent program of Federal financial cooperation in the construction, improvement, development and expansion as are necessary to meet the requirements of public safety, public convenience and the proper functions of the aviation industry in its service to the people of the United States."

Col. Johnson Changing His Mind

Good news to those concerned with airports is the changing attitude of Col. J. Monroe Johnson, Assistant Secretary of Commerce, toward the financial problem of constructing and improving airports. Up through September the Colonel was definitely of the opinion that airports were purely a local problem. Under pressure of municipalities, mayors and other civic interests, the Colonel has obtained a new picture of the airport problem and is reported to "be almost on the verge of advocating a permanent Federal aid program for airports." This change of opinion is a victory for Bureau officials who have long realized that many municipalities have reached their limits financially on airport aid.

Airport Ratings

The airport section of the Bureau of Air Commerce is nearing completion of its comprehensive survey of airports and has also made rapid progress within the past month toward completing the new airport ratings which will classify airports as Super-Terminals, Terminals, Airports, etc. No date has been set for the announcement of these ratings but they are expected to be released before the end of the year.

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Aircraft Vs. Ocean Vessels

Maritime Commission's Report to Congress is Strong Plea for Aircraft to Supersede Superliners; Dirigibles Given Consideration; Recommends Legislation

THE United States Maritime Commission released for public consumption on Nov. 17 one of the most forward-looking documents ever published by a government agency pertaining to aircraft. It was a report to Congress recommending legislation which would place under the regulation of the Maritime Commission all over-ocean air commerce.

The report was notable not so much for its legislative recommendations as it was for presenting the case of the aircraft versus maritime shipping. The report has ample and measured consideration to flying boats, landplanes and dirigibles, but the main brunt of its thesis was that aircraft, no matter of what type, has a very definite place in over-ocean transportation and has many outstanding advantages in initial costs and economy of operation over ocean vessels.

Copies of the report may be obtained by writing to the U. S. Maritime Commission, Commerce Building, Washington, D. C. The title of the report is "Aircraft and the Merchant Marine," and was prepared by Grover Loening, aeronautical adviser to the Commission with the aid of Mr. Loening's assistant, Robert E. Lees. A summary of the report, released Nov. 10, was published in AMERICAN AVIATION for Nov. 15.

Undoubtedly the most significant feature of the report is the estimated comparative costs of aircraft and superliner transportation which make available for the first time data showing that a fleet of six flying boats costing much less than the cost of a superliner such as the Queen Mary or Normandie could carry on regular schedules the same passenger load carried by a single liner and provide much faster service across the ocean. The advantages are all with aircraft as against the exceedingly costly and suicidal construction of enormous superliners.

Comparisons

The report compared the transportation of passengers from New York to Europe with three major kinds of vessels:

1. The superliner, such as the Queen Mary or Normandie.
2. The helium-filled dirigible airship of 9,000,000 cubic feet carrying 100 passengers—the next step in development from the Hindenburg and which is at present actually being designed.
3. The flying boat of 100,000 to 120,000 pounds carrying 40 passengers, as represented by the actual design of three American aircraft manufacturers and which is the directly indicated next step from the 82,500-pound flying boats now being built.

"When considering the cost of delivering passengers to Europe," the report said, "there is one revealing comparison—the horsepower hours per passenger crossing. In the total expenditure of power for the number of hours is found an indication of the cost of hull and machinery and of operating personnel that is properly attributable to each passenger" (See chart).

"The superliner uses 8,800 horsepower hours per passenger crossing, and flying boat uses only about one-fifth as much,—1,680 horsepower hours

per passenger crossing. The dirigible uses but slightly more than the flying boat—1,692. The large installed power of aircraft and the small number of passengers carried is more than counterbalanced by the brevity of a flying boat crossing. The flying boat has only recently approached the dirigible in this regard, and it was this very point that for years gave the dirigible an outstanding position. When it comes to still further increases in speed and consequent decrease in horsepower hours, expended, the flying boat has by no means attained its limit. The superliner, however, even with its power doubled, could increase its speed only a few knots, saving perhaps half a day and with a greatly increased power consumption per passenger crossing."

Passenger Movements

In order to make a direct comparison, the report considered the movement of the same number of passengers per year by the three types of transportation:

1. One superliner making one crossing per week.
2. Two dirigibles making 1½ day crossings on seasonal schedules of 2 to 4 per week.
3. 6 flying boats making daily crossings both ways.

The comparison to the full capacity of the superliner would require 18 flying boats (3 a day) and 12 dirigibles (4 a week).

The report said the construction of a superliner is about \$50,000,000, whereas the construction cost of an equivalent passenger capacity in flying boats is estimated to be about \$18,000,000, and the construction cost of an equivalent passenger capacity in dirigibles would be about the same as a superliner.

"The superliner is depreciated on a 20-year basis, the dirigible on an 8-year basis, and the flying boat on a 5-year basis for present designs and an 8-year basis for future designs. Thus

a \$50,000,000 superliner has to be used for many years when it may have become out of date, while at the end of 5 or 8 years new aircraft will be obtained and the old equipment retired."

The items of depreciation, fuel and crew cost of the three major transportation methods of crossing the Atlantic give a very interesting comparison. The superliner figures out to \$67.58 per passenger crossing, the dirigible to \$131.83, and the flying boat to \$73.10. The 250,000 pound flying boat, which it is believed will be built within ten years, will reduce these costs to almost one-half of that of the superliner and at the same time will carry the passenger six times as fast.

"Six of these large boats could carry 109,500 passengers a year at an estimated construction cost of \$19,700,000 as against the superliner carrying 96,000 passengers a year at a construction cost estimated at \$50,000,000.

Faster Service

"The significance of this fact should not be overlooked when it is realized that the airplane offers by far the faster service. It is extremely rare in the history of transport development of any kind, be it railroad, bus or any other, that the faster passenger service proves to be the cheapest in its early stages."

A distinctly encouraging note for early trans-Atlantic operations is contained in the report's statement that on the basis of an air mail poundage rate considerably higher than the ordinary first class rate, "there is no question, whatever that—in the Trans-Atlantic run at least—very little subsidizing will be necessary other than to start its development."

Pointing out that a 24-hour service between New York and Europe would open up vast types of cargo (such as newspapers and perishables), the report says: "It would appear that these services (one-day to Europe by airplane and a 2½ days by dirigible) may, in the near future, be operated at a cost,

and with a care equal to, or possibly less than that of a superliner. Such faster service, with ample capacity for a large part of the passenger, mail and express traffic will cause superliner service to lose much of its appeal and justification for a large class of traffic."

The report has much to say about reliability of schedules of aircraft, safety, comfort and points out that new aircraft now planned will eliminate any necessity for intermediate stops between New York and London.

Shipping Companies

In discussing the relationship between aircraft and shipping companies, the report says "there are many cogent reasons why a progressive shipping company might well add flying boats to its cabin liners and its freighters."

"Already there is evident a close relationship and community of interest between shipping concerns and airline operations. The Grace Line is half owner of Pan American—Grace Air Lines. The Matson interest owns a large share of Inter-Island Airways in Hawaii. Lufthansa, Hapag and the German Zeppelin Co. are associated. Air France and the Compagnie Transatlantique have formed a new combination, the Air France Transatlantique, and so on. In this country, United States Lines and American Export Lines are already studying plans to add air services to their operations."

"For transoceanic trips, such as New York to Europe, New York to Puerto Rico, Miami to Rio de Janeiro, or San Francisco to Honolulu, the flying boat going over five times as fast as any ocean liner, and crossing these distances in an overnight trip, will offer a valuable service."

"If the shipping companies are not to add aircraft to their fleets, they will undoubtedly lose considerable traffic to independent airline companies. The ocean-going flying boat or dirigible is nothing less than another vessel—a very much faster vessel—and eventually

COMPARISON OF MAJOR ITEMS OF ESTIMATED OPERATING COST
PER PASSENGER CROSSING—TRANSATLANTIC—
AT PROPOSED CAPACITY LOAD AND 100% OPERATION
(BASED ON NEW YORK-LONDON DISTANCE)

	6 Flying Boats (Present Design) (40 Passenger 50 Ton Gr. Wgt.)	2 Dirigibles (Present Design) (100 Passenger 9,000,000 Cu. Ft.)	Superliner (2,000 Passenger)	2 Dirigibles (Future Design) (200 Passenger 10,000,000 Cu. Ft.)	6 Flying Boats (Future Design) (150 Passenger 125 Ton Gr. Wgt.)
Depreciation	\$ 41.09	\$ 70.31	\$ 26.04	\$ 25.00	\$ 22.50
Fuel	17.63	22.46 (Includes Helium Cost)	26.55	18.19 (Includes Helium Cost)	8.37
Wages and Subsistence of Crew	14.38	39.06	14.99	8.66	6.60
Total of Above Items	\$ 73.10	\$ 131.83	\$ 67.58	\$ 51.85	\$ 37.47
Horsepower Hours (Cruising Power) per Passenger Crossing	1,679	1,692 (Est.) (from fuel data)	8,800	1,034 (Est.)	700
Man Hours of Crew per Passenger Crossing	9.6	25	73.7	15	3
Equipment Cost	\$6,000,000 (Fleet of 6)	\$ 7,200,000 (Fleet of 2)	\$ 50,000,000 (One Vessel)	\$ 8,000,000 (Fleet of 2)	\$ 19,710,000 (Fleet of 6)
Equipment Cost per Passenger Accommodation	\$ 25,000	\$ 36,000	\$ 25,000	\$ 20,000	\$ 21,900
Depreciation Period	5 Years	8 Years	20 Years	8 Years	8 Years
Number of Crossing per Annum	730	128	48	200	730
Running Time	17 to 23 Hours	2 to 2½ Days	4 to 5 Days	2 to 2½ Days	18 Hour Average
Frequency of Service ...	2 crossings per day	2 to 4 crossings per week (Seasonal)	1 crossing per week	4 crossings per week	2 crossings per day
Annual Passenger Capacity	29,200	12,800	96,000	40,000	109,500

cheaper to operate. For shipping companies not to make use of this new vessel on their trade routes may prove quite short-sighted."

Considers Dirigibles

It is evident in the tenor of the report that the Commission desired to give every consideration to the dirigible. It points out, however, the higher initial costs of construction, the larger crews necessary, its greater requirements for hangars, mooring masts, helium tank cars and other items "which are certain to make its operating cost higher per passenger than that of the airplane."

The report makes the definite statement that "the dirigible airship still has a place in the merchant marine field," saying that "it may become superior to the superliner, but it is also a fact that the more recent development of large long-range flying boats has made the past superiority of the dirigible for transoceanic service much less important. The long record of the Graf Zeppelin in its successful operations through many years is, however, undeniably impressive."

In the Commission's opinion the dirigible offers an "intermediate service"—not as fast as the flying boat but faster than the superliner. "It undoubtedly provides greater comfort than the flying boat."

The report also points out that the dirigible has a much greater flying range than the flying boat, which opens up such routes as San Francisco to Japan and San Francisco to Australia for dirigible operation without refueling stops.

Up To The Navy

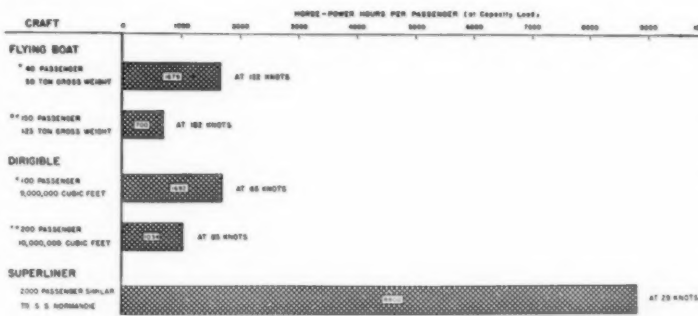
Significant perhaps is the report's statement placing the question of the dirigible squarely before the Navy Department.

"There appears to be no question of the great value of heavier-than-air flying boats, both commercially and as naval auxiliaries. But, since there remains some question of the commercial value of dirigible airships, a statement from the Navy of their value for national defense is desirable to warrant their further construction."

The report also considers landplanes for transoceanic transportation, but considers the flying boat superior at present because of the large landing fields needed for landplanes of the carrying capacity of the flying boats now designed.

In discussing foreign landing rights, the report compares the development of international air transportation with the development of world trade in shipping. In the Middle Ages most of the ports of Europe were closed to general maritime traffic, but some ports, like Danzig, Hamburg, and

POWER REQUIRED FOR EACH PASSENGER
TRANSATLANTIC CROSSING



SEE APPENDIX "I" FOR DETAILS

* THESE DESIGNS ARE NOW UNDER PRESENT CONSTRUCTIONAL DEVELOPMENT

** THESE DESIGNS ARE BASED ON SPECIFICATIONS NOW PROPOSED FOR IMMEDIATE FUTURE DEVELOPMENT

Venice, were open and free. "These soon garnered the trade of the world to such a degree that eventually all ports, finally in Japan, were opened to free world trade."

While it is likely that the historical development of air rights will follow the same pattern, "today we are faced with a situation gravely similar to the old closed port system, which indicates that international air trade and commerce are still in their infancy of development. The prime fear of European nations of invasion from the air has had much to do with the strictness and nationalistic fervor with which air right bargaining is surrounded."

The report describes the landing right agreements made by Pan American Airways, which are almost all private agreements, but points out that this situation has changed with the extension of routes to British countries.

Needs Further Study

"Investigation discloses that all the facts relative to the various contracts, permits and agreements involved, are encompassed with such conflicting elements of international aspect as to make it necessary for the Commission to give them special consideration and study, which is now being done."

"There is no evidence as yet to justify the conclusion, so far as transatlantic flying is concerned, that there exists any limiting factors to the extension of shipping lines or new airlines into this field at any time. But the legislation and regulation with regard thereto need more extensive study, development and review—particularly as this subject represents a

very vital phase of the proper development of our overseas air potentialities for trade and national defense. Such legislation and regulation should be drawn so as to insure the open use of this field to American companies."

In conclusion, the report recommends that legislation be enacted to include aircraft in the Merchant Marine Act of 1936. "The injection of aircraft operations into the same field as the shipping business indicates that transoceanic airlines should logically find as proper a place alongside of shipping in the Maritime Commission as do motor carriers and domestic air carriers alongside of railroads under the regulatory jurisdiction of the Interstate Commerce Commission."

Only Ocean Routes

The report makes it clear that the Commission does not want jurisdiction over overland routes closely allied to our domestic airline system, such as in Mexico and Canada. It does seek regulation, however, of foreign and intercoastal routes such as New York to Puerto Rico and San Francisco to Hawaii.

Finally, the report states that there is need for assistance from the Government in the development stages of aircraft work. This need is largely assistance in covering the high initial engineering development cost of the large size aircraft.

"Consideration should be given modifications of the Merchant Marine Act to permit 75% construction loans on aircraft for the foreign trade, or, failing private initiative, the construction by the Government of the first few of these aircraft and their charter to operators." Either one of these steps, the report says, would give an impetus to the development of our foreign air commerce.

Four charts add value to the report, as do also some fifteen drawings of aircraft designs. There are five designs of the Glenn L. Martin Company, four from the Consolidated Aircraft Co., and five from the Zeppelin Company. Boeing and Sikorsky are notable for their absence.

Moffett Trophy Awarded

The William A. Moffett Memorial Trophy was awarded on November 9 to the aviation unit of the battleship Texas, commanded by Lieutenant George H. Hasselman. The trophy is awarded each fiscal year for maximum of safety in operations among aviation units on battleships and cruisers. It is in memory of the Chief of the Bureau of Naval Aeronautics, who died April 4, 1933 in the crash of the dirigible Akron off New Jersey.

ADM. COOK URGES AIRSHIP DECISION

Asks Navy to Make Up Its Mind on Dirigibles; Reports Need of Shore Facilities

Immediate provision of necessary increases in facilities at shore stations to meet the requirements of increases in number of Fleet aircraft, and the fixing of a future policy with reference to rigid airships within the Navy "at an early date" were among the recommendations of Rear Admiral Arthur B. Cook, Chief of the Bureau of Aeronautics, Navy Department, in his annual report submitted to the Secretary of the Navy for the fiscal year 1937. The report was released November 12.

"Uncertainty continued to surround future policy with regard to rigid airships for Naval uses," Admiral Cook said. "Pending a decision by the Secretary, no further action is contemplated by the Bureau of Aeronautics."

Annual expansion of the number of aircraft required to complete the program as outlined by the Vinson-Trammell Act by 1940-42 "has proceeded satisfactorily," he said. Approximately 256 airplanes and 494 engines were delivered during the fiscal year. On June 30, 1937, the Navy had 927 service and 195 obsolescent aircraft on hand and 820 new aircraft on order.

"This represents an increase of 216 airplanes over the total on hand and on order as of June 30, 1936," he said. "Of the large number on order the majority are due or overdue for delivery and will be delivered within the next few months. This is due to an almost universal failure of manufacturers to allow sufficiently for the time factor in building the more recent types of airplanes having increased complication of design and need for special materials and parts."

Admiral Cook gave particular stress to the lack of adequate shore facilities, particularly on the West Coast. This serious congestion, he said, "has reached the point where it may prove impracticable to operate all carrier aircraft on the West Coast with the Fleet until additional facilities become available. The development of the Naval Air Station at Alameda, Calif., now authorized, will relieve this situation appreciably."

Pointing out that there has been a revived interest in non-rigid airships, or blimps, and a growing appreciation of the value of this type for certain activities, Admiral Cook said funds for two new non-rigid airships were included in the 1938 appropriation and a contract for them will be placed at an early date. He recommended that the development of this type be actively pursued and their utilization in connection with Fleet activities and for coastal missions be extended.

Miss Stansbury Speaks

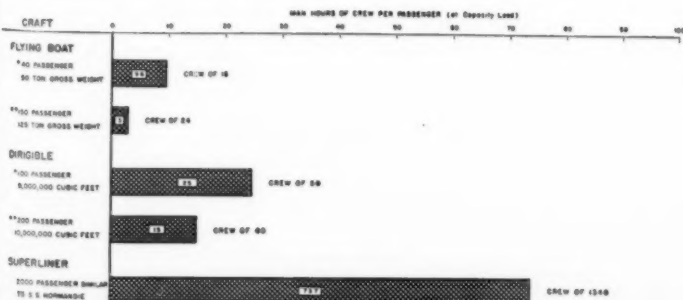
Northampton, Mass., Nov. 17—"Careers for Women in the Field of Aviation" was the topic discussed at Smith College yesterday by Miss Helen Stansbury, a Smith alumna who is now employed by United Air Lines. The lecture was one of a yearly series designed to assist college girls in selecting their future occupations.

Lighting in Dec. 15

Great Falls, Mont., Nov. 1—The city has been notified that lighting of the airway between Helena and Great Falls is to be completed by Dec. 15. With the completion of lighting, Western Air Express will bring an additional plane here daily from Helena, due to arrive about 11 p. m.

CREW (incl. Officers) REQUIRED FOR EACH PASSENGER

TRANSATLANTIC CROSSING



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Aero Chamber Hits Dirigibles in Report; Zep Friends Retort

Elaborate Report to Maritime Commission Lauds Flying Boats, Assails Lighter-than-Air; Rosendahl Calls It "Free Advertising"

The Aeronautical Chamber of Commerce released on Nov. 18 a sixty-seven page report which it had submitted to the U. S. Maritime Commission on "The Superiority of Flying Boats in Transoceanic Service." The report was a determined attack on lighter-than-air craft and was quickly assailed by Commander C. E. Rosendahl, the lighter-than-air authority.

The report was well illustrated with photographs and drawings of existing and proposed flying boats, principally from the Boeing, Sikorsky, Glenn L. Martin and Consolidated companies. Copies of the report may be obtained from the Aeronautical Chamber of Commerce, Rockefeller Center, New York City.

After discussing the relative merits of flying boats over dirigibles, the report states:

"The airplane manufacturing industry knows, through past experience, that the American Government year in and year out will spend only a certain amount of money on aviation. If this money, or a large part of it, is devoted to airship operations, the industry responsible for airplane development here will suffer in all its various branches. Development must lag here if it is to be hampered by action of the Government in scattering its funds on enterprises which, while spectacular, have reached their limit in development and still are unproved economically.

"If Americans enter transoceanic airship operations at the expense of their Government, they will be doing two things:

"1. They will halt the development of flying boat service.

"2. They will continue airship operations until such time as the Government and taxpayers are convinced that these airships are worthless. Then will come the awakening, when Americans may find that their Government no longer will support any kind of aircraft operations overseas, thereby leaving to foreigners all air transport to and from the United States.

"It would be against public policy for the Government to waste funds to support an airship service once or even twice a week when the flying boat service can be supplied for the same cost or less seven days a week.

"The flying boat offers the most economical form of trans-Atlantic transportation by air. It offers a better service by making departures available every day as compared to an airship's once a week. It offers a better service because of its superlative speed. Records show that the flying boat service already available is more economical, more efficient, more reliable, and in all probability safer than airships. It is essential to the economic progress and the national defense of the United States.

"For the reasons stated we earnestly solicit the aid of the United States Maritime Commission toward the adoption of a Government policy that will permit the steady development of American flying boats in transoceanic services."

In its arguments for the ability of flying boats to span the oceans successfully, the report follows the line taken by the Maritime Commission's report to Congress. But after describing the plans of aircraft manufacturers for 100,000 and 150,000 pound flying boats, the report goes into a defense of the flying boat against the dirigible—

and an offensive attack on lighter-than-air in general. The report said that "We are impelled to discuss the airship in this report because of repeated published statements from the airship advocates reflecting on the practicability of flying boats for transoceanic service."

Edward P. Farley, president of the American Zeppelin Transport Corp., answered the Chamber's report by stating: "We who are interested in airships believe in their continued development. We base our faith on the record of the Graf Zeppelin over the North and South Atlantic and the record of performance of the Hindenburg in 1936. Our plans will be announced in the near future, and in the meantime it will become us to comment on a partisan statement or to pit commercial airship performance against a program as yet undeveloped."

Commander Rosendahl told the Associated Press that the Chamber's report "is one of the finest boosts the dirigible has ever had. Intended by its authors to sink the airship and perpetuate the flying boat, by clever digs and bold ones as well the report spends much more space in trying to discredit the airship than to establish the flying boat's claim to permanence.

"Airship proponents are not trying to read heavier-than-air craft out of the oceanic party as the author of the chamber's report might have discovered had he read portions of Dr. Eckener's paper other than only those he has chosen to report.

"Not only is the Chamber's report one of the best bits of free advertising the airship ever had, but it renders the country a great service in clearing the atmosphere and bringing out into the open the character and even substance of the opposition with which the airship is faced. For this important reason, the report is a valuable contribution to the promotion of American oceanic aeronautics. Let's hope the report will be widely read all over the country for that should effectively expedite the airship's achievement for its merited place in American and World Aeronautics."

Two views of the Army's new multi-place pusher fighter built by the Bell Aircraft Corp., Buffalo, N. Y. The air warrior has been given the label of "Aircuda," or "Tiger of the Sky." Lower photo gives a clear idea of the slim fuselage, while photo above is a revealing view taken in the air. Note pusher propellers, automatic cannon, multiple crews, inter-changeable stations for combat crews, and clear forward vision. Allison 1000 h.p. engines power the ship. Army Air Corps photos.

CUT RATES

Soviet Gov't Gets Work Done Cheaply in Arctic

The Soviet Government has found at least one cheap item in its costly search for the missing Russian trans-Polar flyers, according to the Juneau (Alaska) *Empire*.

A. Vartanian, search leader for the Soviets, felt that one of the bases for searching parties should be Aklavik, a community of a few houses in the District of Mackenzie, Canada, near the Arctic Ocean. Vartanian wired Bob Randall, a Canadian pilot, if the latter "could arrange for a landing field for land planes near Aklavik—where no land planes set down before?"

"Sure!" was Randall's answer.

Two days later, Noel Wien flew 400 gallons of gasoline in his tri-motored Ford. He reported the new Aklavik field "excellent."

Vartanian got a bill for the construction of the field designed for the landing of large planes.

It was exactly \$60.

DET.-WASH. RECORD

Penn-Central Clips 55 Minutes From Scheduled Time

A Pennsylvania-Central Boeing on Oct. 30 clipped 59 minutes from its scheduled time on a routine flight from Detroit to Washington. Aided by a 70 to 90-mile-an-hour tailwind, the Boeing, carrying two pilots and seven passengers, flew the distance in two hours and six minutes. Regular scheduled time is three hours and five minutes.

The plane was flown by Al Wilson and Charles Lehr and stopped at Cleveland and Pittsburgh.

TWA Meteorologists Make Actual Flights

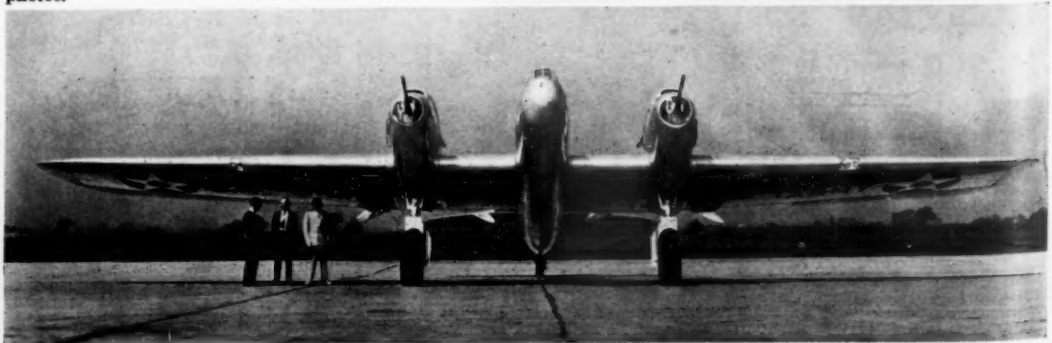
Jack Frye, president of TWA, Inc., has announced that his line is sending some sixty meteorologists on "familiarization" flights over TWA's route as part of the line's policy of educating its own employees with phases of air transportation not concerned with their own particular work.

Frye believes meteorologists should have an opportunity to make a weather forecast and then board the plane and ride into the weather forecasted. This is the procedure followed in the familiarization flights. The meteorologist forecasts the weather, then boards the plane, and makes observations and checks in the air. Most of the men are taken to New York where they have an opportunity to inspect various Weather Bureau facilities there.

Pan Am Drastically Cuts Pacific Fares

Pan American Airways has inaugurated sweeping reductions in rates on the Pacific, effective immediately, and to continue in force until March 31, 1938. They are known as winter cruise sea-air rates to mid-Pacific isles.

Pan Am is combining special round-trip excursion rates with transoceanic flying, the new schedule representing in some instances reductions from the existing combined tariff for steamer travel to Honolulu, and by air beyond, up to 35%. Purpose is to popularize winter travel to the Pacific islands of Midway and Wake. The rates also include Guam and Manila and for the first time put air travel costs on practically the same level as steamer tariffs.



MARTIN TRANSPORT LAUNCHED



W. H. Coverdale, (right), president of American Export Steamship Company and American Export Air Lines, views the Martin Ocean Transport with Glenn L. Martin, the builder.

Orville Wright, followed by several other members of the National Advisory Committee for Aeronautics, descends from an inspection tour atop the Martin transport. Following him are Dr. Willis Gregg, chief of the U. S. Weather Bureau, and Dr. George W. Lewis, research director of the N.A.C.A. Mr. Wright climbed down from the 63,000-pound transport a month short of 34 years after he and his brother made the first heavier-than-air flight at Kitty Hawk, Dec. 17, 1903.

THE Martin Ocean Transport, largest commercial flying boat constructed in the United States, was launched Monday, November 22, at the Glenn L. Martin Company plant at Baltimore.

Constructed for the Amtorg Trading Corporation, agency of the Soviet Government in the U. S., the new Martin boat is the first transport capable of flying non-stop across the Atlantic Ocean with commercial loads of passengers, mail and express.

The huge flying boat has a 285% increase in payload carrying efficiency over the China Clipper, over the Clipper's 2410 mile route from San Francisco to Hawaii.

It is designed to cruise non-stop from New York to London, a distance of 3465 miles, in less than a day and night (23.9 hours) with 1000 miles reserve. On this single trans-Atlantic flight the transport will be able to carry a 7500 pound commercial flying.

Forty-six passengers can be carried on day flights, and sleep comfortably twenty-six in roomy berths at night on longer ocean trips.

There is little doubt that the new Martin Ocean Transport represents a significant new achievement in airplane construction, particularly from the standpoint of long-range commercial flying. It exceeds anything constructed so far in the world.

Construction began shortly after the Martin Company completed its contract for the China Clipper and her two sister flying boats for Pan American Airways. What the Soviet Government plans to do with the flying boat is not definitely known, except that it will not be flown across the Atlantic.

"For the first time in the world's history, Martin has made it possible to

wing across the ocean between the United States and Europe," the Martin Company announcement said "—a tremendous transport profit venture—in one swift non-stop flight with passengers, mail and cargo in less than twenty-four hours.

"The achievement is an aviation engineering triumph of Glenn L. Martin. Martin's accomplishment of completing this great ocean transport signifies three major attainments:

"First, the Martin Ocean Transport is the first flying boat ever built capable of non-stop transatlantic commercial transport of passengers, mail and cargo.

"Second, it is the most efficient ship with a capacity for over-ocean commercial load flights ever built.

"Third, Martin has led the way in the building of bigger ships greatly increasing the payload capacity ratio with the size of the ship—an astounding accomplishment again emphasizing Martin leadership."

The new ship represents a greatly increased efficiency, for it can fly from New York to London with over twice the payload of the China Clipper from San Francisco to Hawaii, nearly half again as far at a faster pace, and with greater reserve.

Four Wright "Cyclone" 1,000 horsepower engines power the transport, whereas Pratt & Whitney engines were used in the China Clipper. The wing span is twenty-seven feet longer than the China Clipper.

The ship can carry 4,260 gallons of fuel. Tail surfaces have been changed from single fin to double to improve directional stability. Prestone, motor-warmed, circulation system provides draftless ventilation as much as 50



cubic feet per passenger minute, with regulated temperatures of 65 to 70 degrees. The heating system also supplies hot and cold running water for passengers and for galley use.

Passenger compartments have been soundproofed, a low noise level of 64 decibels being reached in the compartment compared to 70 decibels on a modern pullman train.

The cabin is equipped with steward's galley. Full vision windows make observation excellent. Luggage space is arranged to be out of the way and permit freedom of movement to passengers. Personal luggage is placed under the seats of the passengers where it is most convenient to reach, and shelf compartments in the rear with zipper type panels hold the less frequently used passenger baggage. The

retiring rooms have all modern toilet facilities.

The bow cockpit and anchor hatch is used for mooring operations and storage of mooring equipment, anchor and searchlight, and provides the mooring seaman's compartment.

The dual flight control station, with side by side arrangement of the flying controls, is located on the bridge of the ship, with the first pilot's seat on the port side and the second pilot's seat on the starboard. In the control cabin below and to the left of the first pilot, the radio operator and radio equipment station is so placed to permit the ready exchange of messages and hand signals between the pilots and radio operators.

The navigation station in the control cabin, aft of the pilot's station, contains map cabinets, chart room, marine library, and navigational equipment. It, also, is immediately adjacent for quick interchange of signals.

The power plant control station for the flight engineer is in the cabin on the hull just forward of the front wing beam. The operations of the flight engineer tend to relieve details not directly concerned with piloting and tend to unburden the pilot from detailed mechanical functions.

Instrument panels, gauges, landing and navigation light controls are all within easy reach and sight. Sperry Gyro Automatic Pilot and all flight controls are within instant touch of the pilots.

"The design conception grew out of continuous checking and flight experience of the successful China Clipper," the announcement said. "The results of greater stressing and design improvements grew out of the experience of building the China Clipper series and the pursued research of her behavior. The Model 156 is a goal achieving stride in the conquest of the oceans by air."

Martin Ocean Transport

Comparison with the China Clipper

Martin Model 130 China Clipper	Model 156 Martin Ocean Transport
Gross Weight—52,000 pounds	Gross Weight—63,000 pounds
Wing Span—130 feet	Wing Span—157 feet
Overall Length—90 feet, 10 1/2 inches	Overall Length—91 feet, 10 inches
Carries payload of 3,500 lbs. for 2,410 miles against a 35 m.p.h. headwind at 130 m.p.h. air-speed	Carries payload of 10,000 lbs. against a 46 m.p.h. headwind at 140 m.p.h. airspeed

Exterior Dimensions—Model 156

Overall Height (on beaching gear)	27 feet, 2 inches
Height Above Full Water Line	20 feet, 6 inches
Span of Ailerons	24 feet, 9 inches
Flap Length	92 feet, 6 inches
Span of Horizontal Tail	38 feet, 6 inches
Beam of Hull	11 feet, 3 inches
Span of Sea Wing	38 feet, 3 inches
Wing Chord—Max.	18 feet, 11 inches
Overall Height	24 feet, 6 inches

Payload and Weight Data

Gross Weight	63,000 pounds
Disposable Load	32,586 pounds
Weight Empty	30,414 pounds
Payload, Fuel and Oil	30,458 pounds

General Performance

With maximum power, the speed is close to	200 m.p.h.
Cruising Speed	145 to 170 m.p.h.
Altitude at which level flight can be maintained with only three engines operating at normal rated power for that altitude	10,000 feet
Landing Speed, with normal gross weight of 63,000 pounds	70 m.p.h. or less
Take-off Time (from full throttle) with normal gross weight	35 seconds

Power Characteristics

Powered by four 1820-G2 Wright "Cyclone" engines, developing maximum power at take-off of 4,000 h.p.	
Ship has 4,800 h.p. maximum take-off power capacity	
The propellers are three-blade Hamilton Standard, controllable pitch, constant speed, with "Quick" type propeller brakes	
Propeller gear ratio—16:11	

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FORTNIGHTLY REVIEW

(Continued from page one)

instant fear of losing the monthly air mail check. They are a minority. The drive for passage of the McCarran-Lea bill is moving stronger day by day.

Labor: Balance of Power

THE government's interdepartmental committee which has been "studying" pending aviation legislation preparatory to announcing the government's own policy, might well give consideration to a new factor in aviation legislation which was not present at the last session of Congress.

This new factor is the labor vote. The American Federation of Labor is solidly behind both the McCarran-Lea Air Carrier bill and the McCarran-Crosser Safety bill. Labor is interested in having the airlines under the economic jurisdiction of the Interstate Commerce Commission but is also definitely determined to place airline safety under the Interstate Commerce Commission. It is supporting the former bill as the first step in its complete program of seeing all scheduled air transportation under the I. C. C.

It can be taken as a foregone conclusion that if the interdepartmental committee recommends legislation which does not include a satisfactory solution of airline safety, Labor will succeed in blocking any bill which the government may propose. The interdepartmental committee is a futile and face-saving move on the part of the government. There is little sense in proposing a new aviation set-up which is going to be defeated in Congress. The McCarran-Lea and the McCarran-Crosser bills are clear in their intent. They can pass. They are the only bills that can pass at the coming regular session of Congress. To inject other proposed legislation is merely to stall and injure the entire legislative program for aviation. The government is using clever means to strike up the band for a side-show. We hope aviation will not be deterred from its forward march into the main tent.

Transoceanic Dog Fight

IT can't be said that over-ocean air transportation was a neglected subject in the news during November.

One of the three outstanding news items for the month was the completion and launching of the 63,000-pound Martin Ocean Transport—another milestone in aviation progress and one for which Glenn L. Martin, the builder, is to be congratulated.

Then there was the report to Congress by the U. S. Maritime Commission, a document notable for its presentation of the case of Ocean Vessel vs. Aircraft for transoceanic transportation. The report was significant for its long-range views, its balanced judgments, its careful preparation and editing, and its documentation of an historic subject. Regardless of the merits of the legislative recommendations which it contained, the report cannot help but have a beneficial effect on aviation. Mr. Grover Loening is to be highly congratulated for providing such a concise, pithy and useful document.

Also in the news was a report which must have puzzled a great many who are not too well versed in the inner workings of the aviation industry. This was the report of the Aeronautical Chamber of Commerce on "The Superiority of the Flying Boat" which it had previously sub-

mitted to the Maritime Commission. We wonder why the Chamber ever decided to release publicly a report that was bound to bring—as it did—a modicum of ridicule to the whole transoceanic picture. In all frankness, the issuing of the report was an exhibition of ill-advised public relations for aviation.

The Chamber's report, we regret to say, was all the more of a miscarriage because it followed by only a day the Maritime Commission's report. It was with considerable shrewd deftness that the Maritime Commission presented its case of all aircraft versus surface transportation. It is true that a careful reading of the Commission's report threw a more favorable light on the flying boat than on the dirigible, but it did not make the mistake, as the Chamber's report did, of openly attacking another form of air transportation in a document released for public consumption.

We quite understand the feelings of the flying boat people toward the dirigible. But aviation's advancement is dependent upon public support, upon Congressional action, upon appropriations. For the Chamber to start an industry dog fight in the public forum at a time when Congress is faced with the problem of determining the future of foreign air commerce, is, in all frankness, short-sighted. Intra-industry scraps hardly aid aviation's cause with the public.

We were interested to note that the New York newspapers devoted more space to lighter-than-air proponents in replying to the Chamber's report than to the report itself. Boake Carter followed up in his newspaper column with a barrage of ridicule.

The main problem at the moment is not whether flying boats or dirigibles shall fly the Atlantic, but the problem of aircraft versus ocean vessels. Intelligent public relations in Washington should gain far more for all concerned than a public argument over which type of aircraft shall fly the Atlantic. For the probability is that both types will fly and a united action of all aircraft proponents will result in more business in the end for all.

Red Ink

NO one in the industry likes to admit the fact, but no amount of doctoring up figures and statistics can hide the serious state of the air transport industry's financial condition.

Despite a series of record-breaking months during the summer, red ink is going to be the predominant color on the ledgers of most airlines for the calendar year. And this time the red ink is going into six figures and perhaps even seven figures for one company.

Most companies enjoyed a profitable second and third quarter, but the fourth quarter of the calendar year is going to be one of the worst in the industry's history. No one wants to spread a gloomy picture but the seriousness of the industry's finances has gone too far to avoid a frank facing of facts.

The need for constructive legislation which will give the air transport industry stability and a sound economic future has been all the more apparent since the summer ended. One line, for example, rang the bell in September with all sorts of new records—passengers and express—and yet lost a neat wad of money.

As one airline executive expressed the situation, "This time the cry of 'Wolf' really means something."

The outlook for the year was good in mid-summer. The year started off very badly as a result of the series of accidents last winter. But without exception, every airline showed steadily increasing business during spring and up through September. Several lines made remarkable showings.

Bad weather in the middle of October began to slow up both operations and passenger revenues. Then came the United crash in Utah on the 17th. More than one airline official hoped that this crash would, for once, do no more than temporarily reduce loads. Everyone had hoped for a good winter. But although passenger traffic has held up very well between some major terminals, there is no glossing over of the fact that passenger travel slid downward and has stayed there. The figures show it.

November is expected to be low. Figures for the early part of the month show passenger traffic running from thirty to fifty per cent behind October. There was much more than a seasonal drop. The airlines are hoping fervently that the November report will not be below some of the months early in the year. But November of 1937, will in all likelihood, be below the same month of last year.

Apparently not a single line of any importance will end in the black this year and some lines will show heavy losses. And this despite the profitable second and third quarters. Under the surface there is plenty of gloom and serious concern, a gloom that would lift in one second if satisfactory legislation were enacted and became law. It's a subject no one wants to talk about but financial reports are bringing on beaucoup headaches.

Ed Williamson, NAA Chapter Head Doesn't Just Talk About Airplanes

When the Seattle Chapter of the National Aeronautic Association recently looked around for a new president, it selected a man who not only talks airplanes but uses them. The new chapter head is Edward B. Williamson, president of the Bearing Sales & Service Company, of Seattle, who started his aviation career in 1916 when he joined the Royal Flying Corps at Toronto, where he was born May 29, 1898, and where he had just completed engineering studies at the



Williamson

University of Toronto.

One day Williamson was a raw recruit, with blissful ignorance of airplanes and what made them go. The next day he was an instructor in flying.

"I must have had all of ten hours when I was assigned to instruct my first student," he smilingly recalled to Dick Rummell, United's crack publicity man in Seattle who is secretary of the chapter. "From that time on I instructed at virtually every camp in Canada. I flew Camels, Bristols and Nieupoits.

"Camels were powered with Gnome engines. The crankshaft stood still and the cylinders revolved around it. The engines didn't have any carburetors and, as a result, there were just two speeds—stop and go. The raw gas fed into the cylinders through the shaft. If you wanted to stop you pressed a button on the stick and that shut off the ignition. When you took your thumb away it was supposed to start again. Sometimes it would, too. The engines were lubricated with castor oil and they threw it back in your face—ugh!"

Williamson's military service continued until an unlucky day late in 1917 when on one of his flights something went wrong. The net result was an injury which led to an honorable discharge from further instructing.

With such engineering training as he had had, plus what mechanical knowledge he had picked up in the war, Williamson went into the bearing business at Seattle. In 1931 the itch to get back into the air was too much for him. He learned all over again, then purchased a plane for both sports and business use. Today he flies a Parks two-place open cockpit job, sometimes just for pleasure jaunts around Seattle and at other times on business trips to nearby points. For longer journeys he uses the scheduled airlines.

Williamson succeeded former Mayor Charles L. Smith as president of the chapter. He's always boosting aviation, no matter where he is. He also holds the state presidency of the Young Men's Business Club.

Unsolicited Comments

"I have found vital information in AMERICAN AVIATION, of particular interest to me, which I have failed to find in other publications. Regulation of air transport companies as public utilities is inevitable. It is of great value to me to be able to trace the trend toward such regulation in the pages of AMERICAN AVIATION." Ansel Williams, Jr., attorney-at-law, San Francisco.

"I want to take this opportunity of congratulating you on the wonderful magazine you are putting out, for in the three issues I have been able to keep myself much better posted than ever before in the ever-changing aviation picture. As you can probably realize to be successful in Chamber of Commerce work, one must know as much as possible about the picture and I am certainly getting a great deal of help through your magazine."—Kennard Jones, secretary, aviation committee, Spokane Chamber of Commerce.

"I wish to take this opportunity to express to you my opinion that your publication is, without exception, the most worthwhile and informative of any aeronautical magazine or pamphlet being published today." Newton H. Crumley, Jr., Elko, Nevada.

"You are doing a wonderful job with AMERICAN AVIATION, and you certainly deserve the popularity you are earning within and without the industry. For the first time in my memory we are getting unbiased aviation news on events in Washington and generally over the country. You are giving stories the proper play they deserve, covering the subjects fairly to everyone." C. W. Dayhoff, general manager, TWA news bureau, Kansas City.

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Aeronautical Bookshelf

All books listed in this department may be purchased through
American Aviation

THE WAR IN THE AIR, Volume VI, by H. A. Jones. 558 pages and 173-page appendix. \$10.00. Oxford University Press, New York.

This is the final volume dealing with the part played in the World War by the Royal Air Force. It is the story of the war operations and developments of the air service and is brought to a conclusion by narratives dealing with the events leading to the creation of the Royal Air Force, with supply and man-power problems, the Independent Bombing Force, air operations in Palestine, the Italian front, and naval air developments and operations.

One small section of the book discusses America's entry into the War and its effect on the Royal Air Force. Jones states that the United States entered just as Britain was beginning to suffer from a shortage of suitable wood for aircraft construction.

The author also prints certain official German documents with reference to the damage inflicted by Allied bombing attacks in German territory.

In the appendix, which accompanies the text, are papers of value to students of air power, together with maps and statistical data.

Jones has, throughout the six volumes, made every effort to be absolutely accurate and has accomplished this in addition to presenting such a wealth of material in readable, interesting form.

IF WAR COMES By R. Ernest Dupuy and George Fielding Eliot. 368 Pages. \$3.00. The Macmillan Company.

The authors, one a major in the field artillery, U. S. Army, and the other a late major, military intelligence reserve, endeavor sincerely to provide a few pointers about "the next war". Theirs is essentially the story of the war on the ground, expressed with much conservatism in an effort to disavow the much publicized "new horrors" which fiction writers have used to scare the populace. The next war, say the authors, will not be as much different as the last one as we have been led to believe. The one important new factor is the airplane.

The authors do not take much stock in the belief that the next war will be a war in the air—or won by the air. Man is not by nature a flying animal, they point out. "He flies by means of a machine which he has invented, the airplane; he cannot remain indefinitely in the air, but must come down when the fuel . . . is exhausted: a matter not of weeks or days, but of hours." This, then, is the first and greatest limitation of air power—a limitation of the time of flight. "Air power can contribute to a final decision in war, only as it affects the situation on the ground".

While the authors believe that air power will assuredly be the initial instrument of attack in wars of the immediate future, they believe this power will be employed against military objectives and not against centers of population. They believe that air power is incapable, alone, under present conditions, of bringing about an immediate

decision by such attacks, because of its inherent limitations. They believe that no major power will attack civilian centers because of the danger of reprisals and the lack of effectiveness of such attacks.

Furthermore, the authors have concluded that the major powers do not have anywhere near enough bombing planes to engage in a prolonged war in the air—to make overwhelming attacks on the Douhet model—and the authors do not see any such air force available in the "foreseeable future." They do believe, however, that the attack plane has sounded the knell of horsedrawn artillery and transport and that the airplane makes more difficult the motorized and mechanized movement of modern armies. They stress the fact that air power is an offensive weapon and that the airplane cannot be employed defensively—it must always be on the offensive. And they stress also the fact that air power cannot hold, cannot physically restrain the passage either of ground troops or of other aircraft or occupy and hold a position on the ground.

There are excellent discussions of the Spanish war; of each major power, of ground forces, and with an expansive appendix with estimates of air and ground forces of all nations.

AIR CORPS TECH SCHOOL Published by the Army Air Corps. 70 pages. Illustrated.

In place of one of its regular issues of The Air Corps News Letter, the Air Corps has issued a booklet describing its technical training program. The purpose is to explain what already has been accomplished and to stimulate interest and cooperation of the entire Air Corps toward a realization of the mission of the Air Corps Technical School. Up until now, the only school has been at Chanute field, but a branch is being built at Denver to meet the ever-increasing requirements. There is a forward by Lieut. Col. Junius W. Jones, Commandant. There are many excellent photos of personnel, students and workshops.

COL. SMITH HONORED

New National Guard Hangars Named for Him

Birmingham, Ala., Oct. 30—The new home of the 106th Observation Squadron, Alabama National Guard, located on Birmingham Municipal Airport, was formally dedicated here today as the "Sumpter Smith Hangars". The \$400,000 quarters were named for Col. W. Sumpter Smith, a former commander of the squadron, who is now principal aeronautical engineer for the WPA in Washington.

General John C. Persons, of the Alabama National Guard, who was master of ceremonies, pointed out that Col. Smith had pioneered in laying out and flying air mail routes in Alabama; had established a major portion of Alabama's present airfield system, had been instrumental in the establishment of the Alabama Aviation Commission, and had made other contributions to Alabama aviation.

Braniff Wins Increased Mail Pay in Broad I. C. C. Decision

Although P. O. Claimed Non-Mail Operations Caused Braniff's Losses, I.C.C. Takes All Credit-Trips into Account in Granting Rise

C. Edward Leasure, examiner for the Interstate Commerce Commission, recommended on Oct. 27 that the ICC increase the rates of mail pay to Braniff Airways, Inc., on route 9, from Chicago to Dallas, and route 15, from Amarillo to Brownsville, Texas.

It was recommended that the base rate on the Chicago-Dallas route be increased from 28 to 29 cents per airplane mile, with this pay retroactive to Nov. 12, 1935. The monthly base mileage on this route is 55,000 miles. For route 15, Leasure recommended an increase from 27 to 30 cents a mile for mail carried between Nov. 12, 1935, when a rate readjustment was asked, and July 15, 1937, with base monthly mileage of 64,000 miles. After the latter date, he recommended the pay again be 27 cents a mile but that the base monthly average be increased to 110,000 miles.

Braniff Airways, in its petition, stated that its operating experience since March 1, 1935 demonstrated that the rates for the two routes were not fair and reasonable. Equipment replacements, safety regulations, service requirements and increased personnel have caused operating losses despite the company's efforts to operate economically and efficiently.

At the hearing, counsel expressed the belief that the exhibits presented by it would support rates equal at least to the statutory maximum of 33 1/3 cents per mile, and on brief urged that the Commission should fix that rate as of the date of the filing of the petition. The petition was filed Nov. 12, 1935 but was indefinitely postponed first at the request of the petitioner and later at the request of the Postmaster General.

Since Dec. 10, 1934, the authorized mail-pay service over route 9 has been increased from a monthly average of slightly more than 57,000 miles to 82,500 miles. On route 15, the increase has been from 64,700 miles to 73,000. The authorized mileage on this route has been further increased effective July 16, 1937, to 106,093 miles per month.

Off-Line Services

Braniff has from time to time operated passenger schedules on both routes in addition to the authorized mail-pay service. Its service on route 9 between Kansas City and Dallas via Tulsa was discontinued Feb. 20, 1936, by order of the Postmaster General, who held that it constituted off-line service and was offering competition to TWA between Kansas City and Chicago, and American Airlines, between Chicago and Fort Worth.

The petitioner introduced evidence showing that service with multimotored equipment had greatly increased. On route 9, only 8.9 percent of the total airplane miles were flown with multimotored equipment during the period March 1, 1935 to June 30, 1935, as compared with 89.4 percent during the fiscal year ended June 30, 1936. On route 15 the percentages were 54.1 and 79.9 respectively during the same periods.

During the fiscal year ended June 30, 1936, pound-miles of mail moving over route 9 were 232,649,161 on mail-pay schedules and 3,714,876 on weight-credit schedules. Route 15 showed 80,724,360 and 9,510,368 respectively.

Figures introduced showed that the volume of mail over both routes is steadily increasing.

Braniff stated that since the end of the fiscal year 1936 the mail on both routes has increased to such an extent that it is necessary to limit the sale of passenger seats to eight or nine on certain trips.

Passengers Restricted

A witness for the petitioner testified in this connection that out of a total route mileage of 2,048 miles, there were passenger-seat restrictions on 1,499 miles. At tariff rates the value of passenger seats thus restricted was shown to aggregate \$6,087, exclusive of certain trips between Chicago and Kansas City where the passenger load was nominal due to competition.

In addition to these regular restrictions, it was necessary on occasions to impose further restrictions when information received from the Postmaster General indicated unusual loads of mail were expected. At times, available seats for sale were reduced to four. Such instances were said to occur with sufficient frequency to injure the reputation of Braniff and result in a loss of actual and potential revenue.

In January, 1935, Braniff ordered seven Lockheed Electras at a cost of \$350,000. These planes have a passenger capacity of 10 and cruise at 180 miles per hour. In connection with these new planes there was additional outlay of \$80,000 for incidental equipment. Prior to June 30, 1936, the company retired five Lockheed Vegas, two Stinsons, a Travel Air and a Mercury Mars at a net book value of \$247,549.

During the fiscal year 1936, 7,435 revenue passengers were carried 3,252,205 passenger miles on route 9, exclusive of the passenger service via Tulsa. Passenger seat-miles operated were 10,045,273. On route 15, 11,315 revenue passengers were carried 3,308,951 revenue passenger miles and total seat-miles operated were 10,904,428.

Current and accrued assets as of June 30, 1935, amounted to \$178,244 and on June 30, 1936 were \$185,607. Current and accrued liabilities as of the close of the fiscal years 1935 and 1936 were recorded at \$445,059 and \$515,391 respectively. Unappropriated surplus consisted of profit and loss debit balances of \$117,067 and \$251,718 respectively in which are reflected losses totalling \$90,543 sustained by the petitioner prior to the commencement of its mail operations. Long and Harman, Inc., was the predecessor company of Braniff.

\$99,600 Increase

On route 15 the increase in authorized mail-pay service effective July 16, 1937, amounts to 32,363 miles per month. This was practically a conversion of weight-credit service into mail-pay service. At 27 cents, this would result in additional mail-pay compensation at \$8,300 per month and \$99,600 per year for 95 percent operating efficiency.

In his conclusion, Leasure stated that: "The evidence of both the Postmaster General and petitioner show losses of approximately \$14,000 and \$94,000 from operations on routes 9 and 15 respectively, during the fiscal year ended June 30, 1936. However, the Postmaster General contends that the

PRO, CON AND OTHERWISE

Nov. 16, 1937

To the Editor:

I think Fred Fagg should be congratulated on the clever manner in which he has usurped state rights and forever blasted the hope for a widespread private use of aircraft.

It would seem to me that in one fell sweep, he has removed the plane from the category of a versatile media of private transportation, and placed flying on a basis equally as complicated as maritime practice.

It may be that it is time to give aviation over to scheduled air transport on the assumption that therein alone lies aviation's real worth. But, I still like to dream of a million privately owned aircraft, and cherish that one hope that keeps private and miscellaneous flying alive.

I cannot imagine how such a dream may ever be realized now. An airline-dominated Bureau of Air Commerce has capably frustrated the hope.

Try and imagine public acceptance of a private media of transportation that is made so complicated by regulation that it takes professional study to master the technical requirements.

The one man—Vidal—who attempted to encourage low cost and simplicity of operation was crucified by a half-witted humorist and his journal, an alibiing airline, and a Copeland Committee whose findings showed abominable technical ignorance, or stinking bias—call it what you may.

Most of us liked to place the airplane in the same category as the automobile. We hoped for the engineering feat that would make it equally as economical, simple of operation, and as versatile in use as the automobile. The 10,000 airplanes flying, after 34 years, isn't a creditable indication of success. Not when one thinks of 40,000,000 automobiles on the road after the same period of time.

greatest portions of these losses are due to the operation of other than mail or connected services, i. e., to weight-credit and on-line and off-line exclusive passenger schedules. In *Air-Mail Compensation*, published March 11, 1935, the Interstate Commerce Commission said that results of off-line operations are not to be considered in fixing rates, and by the terms of the act losses resulting, in the opinion of the Commission, from the unprofitable maintenance of 'non-mail schedules,' where the gross receipts from such schedules fail to meet the additional operating expenses occasioned thereby, must be disregarded. Weight-credit service, however, does not fall within the classification of 'non-mail schedules.'"

Leasure also said that, "When it is borne in mind that the greatest portion of the increase in revenues the petitioner has heretofore experienced has come from services other than mail, it becomes evident that it is the mail rates which are not contributing their fair share toward the petitioner's earnings." He went on to recommend the increase.

William I. Denning, Roger J. Whiteford and John W. Cross represented Braniff at the hearing. Karl A. Crowley, solicitor, and Paul D. Page, Jr., assistant solicitor, represented the Postmaster General. Both sides may now file exceptions to Leasure's recommendation and following this, the ICC will submit the final decision.

Only the airliner, or the millionaire's air-yacht, filled with gadgets and a master crew, can enjoy full freedom in the traffic lanes. The row boats can paddle about in the back-waters. Sailor, have you got your master's ticket?

We have grown up in regulation. We feel secure in our own status. We have our tickets, but we haven't given much thought to those who follow.

I wonder if airplanes will ever be more widely used in private transport than the scattering of private boats using navigable waters?

Jupiter.

Nov. 16, 1937.

To the Editor:

WE HAVE DABBLED IN CLASSICS; SKIMMED CREAM FROM GRADE A CONTEMPORARY LITERATURE; BEHELD WORKS OF MASTERS OLD AND NEW STOP BUT NEVER SO EXQUISITELY PLEASURED AS WHEN WE TURNED TO PAGE ELEVEN JUST NOW STOP FROM OVERFLOWING HEARTS WE THANK YOU STOP ALL LOVE IN WORLD

Warwick and Werner,
Northwest Airlines
New York City.

Correction

In review of the book, *Weather Elements*, published in the Nov. 15 issue, the publisher was erroneously listed as the Ronald Press. The publisher is Prentice-Hall, Inc., 70 Fifth Avenue, New York.

Chicago and Southern Air Lines, Inc.

THE VALLEY LEVEL ROUTE, which is ideal for year round flying approaches this winter better equipped than ever before to offer its patrons comfortable and dependable service.

An established safety record of winter operation is augmented by improved airports, new and more powerful radio ranges, new anti-static loop antennas, new de-icing equipment for propellers and wind shields, new homing devices, and a new teletype weather circuit from New Orleans to Chicago.

Chicago and Southern Air Lines, Inc.

Regulations Limiting Airport Flying Protested at St. Louis

Clare Bunch, Monocoupe, Asserts Situation "Intolerable and Deplorable," Ruinous to Aviation; Cited for Violation on Clear Day

St. Louis, Nov. 13—Clare Bunch, president and general manager of the Monocoupe Corporation has joined various other aviation interests in St. Louis in vigorously protesting the new regulations affecting flying on or off Lambert-St. Louis Airport. Mr. Bunch, in a letter to Joseph M. Darst, chairman of the St. Louis Airport Commission, has called the situation "intolerable" and "deplorable."

The protest is against that part of the regulations which states that "when the visibility is less than three miles, the field shall be closed to all operations except transport planes, planes owned by the government including Army and Navy and Department of Commerce planes, and privately-owned planes flown by pilots having a non-scheduled instrument flying rating."

"In order to obtain this rating," Mr. Bunch said, "a tremendous expense is necessary both in time on the part of the individual pilot and in equipment which must be installed in the airplane, consisting of complete blind flying equipment and in addition two-way radio."

"Anyone who knows weather conditions in this vicinity realizes that many times during the winter months when the sun is shining or when the weather is comparatively good, we will have local smoke or haze here at the airport which will limit the visibility to less than three miles. However, once in the air usually this condition ends three to five miles away from the airport where clear weather or normal conditions will prevail."

Cited for Violation

"For instance, yesterday morning I took off from Milwaukee. It was a beautiful day, clear and unlimited all the way down to St. Louis. Three miles away from the field I ran into a local smoke condition which lowered the visibility to less than three miles. I came on into the airport thinking nothing of it only to find that I had been reported by the Control Tower to the Department of Commerce for violation of regulations and I also found that the field was closed to all activities except those mentioned above."

"The operations of the two manufacturing concerns located here on the field—namely Curtiss-Wright and Monocoupe—should not be considered in the same category as passenger hopping, student work and other types of activity of similar nature. As manufacturers it is necessary that we make test flights even when the weather is not of the best because of certain schedules which we must meet. It is not possible for us to delay our construction program simply because the visibility is low as was the case yesterday. Furthermore it is not possible for us to equip all of our ships with complete blind flying instruments and two-way radio. Neither is it possible for me to equip my demonstrator in such a manner since I use a demonstrator only a short while and then I dispose of it. As can readily be understood, the demonstrator must be a stock airplane and not loaded down with a lot of extra equipment."

"As one of the largest taxpayers on the airport we feel that this situation must be remedied at once and that such flight operation as we feel are necessary must be conducted at our own discretion. I do most of my own test

flying as well as the selling and feel completely competent to judge for myself whether or not an operation is hazardous."

Wants Sane Regulation

"Please understand that I am in no way against any regulations to promote the safety of aviation. I am merely announcing myself as being against a form of regulation which obviously is so harmful. There is one way which we can provide complete safety in regard to the operation of an airplane and that is to ground the airplane and never fly it. This is obviously not the way to promote aviation but it seems that this is the trend as exemplified by the regulation of which I am speaking. Since regulations are making themselves felt in my sales by increasing the burden which the private owner must bear and seriously curtailing the efficiency of his machine as a transportation unit, the time for concerted action has arrived and I would be pleased to hear from you and see what steps can be taken to remedy such a deplorable condition."

"I might mention that the field was closed practically all day and yet the sun was shining as brightly as it is right now and the region of poor visibility was limited from three to five miles from the airport. From an altitude of two to three thousand feet the visibility was excellent for several miles. I sincerely feel that it was not the intent of the Bureau of Air Commerce to handicap flying to such an extent as has resulted from the enforcement of this regulation and that the problem must be brought to their immediate attention for an immediate solution."

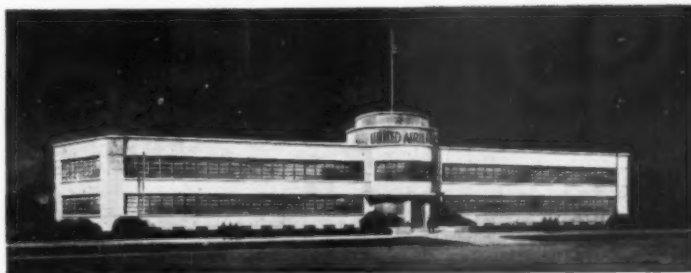
Fred D. Fagg, Jr., Director of the Bureau of Air Commerce, said he was going into the St. Louis airport matter. "It is a question to which we must give very careful thought," he said, indicating that Mr. Bunch's attitude was "a very healthy sign in aviation development." He added that "you may be sure that we shall do everything within our power to try not to complicate the fun of flying by any unnecessary regulations."

Braniff and American Bury Hatchet, Merge Sales Offices in Southwest

Dallas, Texas, Nov. 16—Terminal facilities of Braniff Airways and American Airlines will soon be merged here in the building at present occupied by Braniff. Consolidation of the two lines' off-line ticket office in Houston has already taken place and a merging of terminal operations at Fort Worth is planned.

C. R. Smith, president of American Airlines, and T. E. Braniff, president of Braniff Airways, decided upon the consolidations in the interest of public convenience and in order to economize on needless duplications of expense. Officials made clear that the move in no way indicates a financial affiliation of the two lines.

American and Braniff now have terminals at opposite ends of the Dallas Airport. When American moves to Braniff's terminal, the ticket office will be manned by combined personnel of the two airlines. In Houston, American is giving up its



Architect's drawing of the \$200,000 modern office structure to be built by United Air Lines directly across the street from the airline's present hangars at Chicago Municipal Airport. The property has a 350-foot frontage on Cicero Avenue and is 108 feet deep. Construction will begin Dec. 15. The architect is Albert Kahn of Detroit. UAL's announcement said this will be the first large airline office building designed in advance for not only operating units but for engineering, research and technical departments. The building will be of steel and reinforced concrete, faced with polished Indiana limestone. The building will be air-conditioned.

IMPERIAL AIRWAYS ORDERS 8 PLANES

Total of 31 Flying Boats Purchased; Adds Five 4-Engine Landplanes Made of Wood

London, Nov. 9—Imperial Airways has placed orders for the construction of eight more airliners—five four-engine land planes and three Empire flying boats. Including eighteen other airplanes also in construction, the company's fleet totals seventy-nine aircraft of 185,000 aggregate horsepower.

The landplanes are de Havilland D. H. 91 monoplanes, generally known under the class name "Albatross." Each is powered with four of the new Gipsy-Twelve air-cooled supercharged engines, each giving more than 500 h. p. for take-off. Their cruising speed is expected to be about 200 miles per hour. Delivery is expected to begin next spring.

The Albatross is built entirely of wood with stressed skin wings built up around a massive main spar, with covering of laminated plywood. The fuselage is a monocoque shell of new material, consisting of a kind of sandwich of the extremely light balsa wood between layers of plywood. Cooling air for the engines, which are completely enclosed in streamlined nacelles, is admitted through apertures in the leading edge of the wings.

The first order for Albatross monoplanes was placed by the Air Ministry. Originally the machine was designed to

meet an official "transatlantic" specification, calling for a four-engine airplane able to carry 1,000 pounds of mail at least 3,000 miles non-stop. The first model has nearly finished trials.

The three extra flying boats will bring Imperial's order for this type of craft to thirty-one, twenty-four of which have already been delivered. These boats have taken over many of the main Empire routes.

WAE Orders Lockheeds

Los Angeles, Nov. 18—Two modified Lockheed Model 12 planes, designed to carry six passengers and a crew of two, have been ordered by Western Air Express at a total cost of \$100,000. The planes, which are scheduled for delivery early in December, will be placed in service on the route between Great Falls, Helena, Butte, Idaho Falls,ocatello and Salt Lake City.

UNITED..



A Record of 20,000 Coast-to-Coast Flights

Ten years ago United flew its first coast-to-coast passenger schedule. This month it completes 20,000 flights between the Atlantic and Pacific over its Central Mid-Continent route, the Nation's "Main Line" Airway. No airline in the world has such a record of long distance operation.

RESERVATIONS:

Any United Air Lines Ticket Office, Hotels, Travel Bureaus, Telegraph Offices

UNITED AIR LINES

Denver Night Flying

Denver, Nov. 15—United Air Lines has announced that installation of lights and radio facilities will be completed by Jan. 1 to allow introduction of direct night service through Denver. At present only daytime flights come to this city, since it is off the main coast to coast airway through Cheyenne.

Crowley Denies O. K. on Third UAL-WAE Sleeper Lease Contract

The Post Office Department again has denied approval of a leasing contract between United Air Lines and Western Air Express by which sleeper planes would be used in a through service between New York and Los Angeles via Salt Lake City. Post Office Solicitor Karl A. Crowley submitted his recommended denial to the Postmaster General Oct. 16 and the decision was made public Nov. 13.

The contract involved was the third reached between the two lines, the first contract never having been submitted to the Post Office Department. The second contract was submitted to the P. O. in June and was denied approval on Aug. 26. The third contract was dated Sept. 4.

Mr. Crowley's decision of Nov. 13 was essentially the same as that of Aug. 26, viz., that United under the leasing agreement would have virtual control over Western Air Express contrary to the provisions of the Air Mail Act of 1934.

"I have carefully examined the provisions of the new contract and find that it differs only from the contract of June 18, 1937, in the degree of control exercised over the operations of Western by United," Mr. Crowley said, "rather than the character thereof. It still provides for the operation of through plane service by means of eight Douglas DST sleeper planes owned by United and two by Western, the latter to bear the insignia of United as well as that of Western and to be designated 'Mainliners'.

"It is apparent...from the provisions of the contract that United is still the operating master of Western Air, in so far as disposition of equipment is concerned and the use of same upon such route or in such service as United may elect...The lease is obviously a mere empty formality so far as the attitude of the parties to this contract are concerned.

"The applicants refer to the contract as a leasing agreement. It is much more than a leasing agreement. It is rather an agency agreement whereby the planes of one company are employed to conduct a service off the line of the respective plane owners' routes, which is forbidden by law...

"The Department's administrative policy is naturally not involved in this decision, but it is doubtful in my mind whether the government, having a knowledge of all the facts, could ever approve this contract even if it should not be considered unlawful, because of the adverse effect on the earnings of two other transcontinental lines which are forced to compete with each other for business originating between eastern points and Los Angeles, and especially when we consider that already one of the objecting companies, the American Airlines, Inc., has just secured a raise of its rates by approximately \$345,000 per year, and another objecting company, Transcontinental & Western Air, Inc., is applying for higher rates.

"Should this proposed operation be allowed these companies would undoubtedly ask for further payments of Government funds for the operation of their respective air mail routes. Therefore the question of policy or the effect of any such competition will not be discussed.

"I am forced to the conclusion...that the contract which has been submitted to the Postmaster General by

United Air Lines Transport Corp. and Western Air Express Corp. is, in effect, an agreement for the operation of service forbidden by law, and that it is otherwise repugnant to the terms of that law."

Aeronautical School Uses Boeing 247-D

Oakland, Calif., Nov. 16—The Boeing School of Aeronautics is using a three-mile-a-minute Boeing 247-D transport for training in the flying of multi-motored aircraft, it was announced recently by T. Lee, Jr., general manager. Instruction in this type of plane is included in the Airline Pilot and Operations, and Special Airline Pilot courses. The Boeing School fleet of 10 planes includes a Lycoming-powered Boeing 203-B, Wright-powered Boeing 203 trainers, a Stearman trainer and a Stinson Reliant. The new advanced Trainer, T-5, is to be added in the near future.

The Boeing 247-D which is being used, has a maximum speed of 202 miles per hour, power being furnished by two 550 horsepower supercharged Pratt and Whitney Wasp engines. The 13,650-pound plane has retractable landing gear, Hamilton Standard constant speed propellers and two-way radio.

RYAN APPOINTS

Special Aircraft Sales Representative, Service Department Foreman Named

San Diego, Calif., Nov. 15—Senior Miguel Zuniga of Mexico City and Los Angeles, was recently appointed special Ryan aircraft sales representative. He left last month on a year's tour of Latin America. After traveling extensively in Central America and Mexico, he will make a sales tour of South American countries.

Fred Rohr, production manager of Ryan Aeronautical Company, has also announced the appointment of Edward Oberbauer as service department foreman of the Ryan factory. Oberbauer will have charge of all service work on Ryan S-T and S-C planes which visit the factory for routine inspection and service.

Two photos taken at the annual meeting of distributors of the Cub at Lock Haven, Pa., Nov. 9-10. Group photo shows not only distributors from all parts of the country but Taylor Aircraft officials and a line of Cubs in the background. Other photo shows a Cub on floats in the river which flows by Lock Haven. Floats were installed especially for demonstrations.



842 ACCIDENTS FIRST SIX MONTHS

Safety Record for First Half of 1937 Below 1936; Fifty-Eight Pilots Killed

There were more accidents in miscellaneous aircraft operations during the six months, January-June, this year than in the same periods for 1935 and 1936, but the miles flown per passenger fatality was slightly better than either of the two preceding years, according to a Bureau of Air Commerce report issued Nov. 8.

Fifty-eight pilots lost their lives in miscellaneous flying during the six months, compared with forty-eight last year and sixty-seven the year before. On the whole the first six months of this year was somewhat worse from a safety standpoint than during the same period in 1936.

Miscellaneous aircraft operators flew 45,059,950 miles in the first six months of this year, as against 40,184,030 miles in 1936 and 38,401,970 in 1935. A total of 634,251 passengers was carried in this year's period, of which 509,254 were for hire.

Miscellaneous flying embraces all civilian flying other than that of scheduled airlines, and includes charter and taxi service, flight instruction, experimental and test work, special services like crop dusting and photographic flying, and private flying.

	January-June 1935	January-June 1936	January-June 1937
Miles flown	40,234,185	41,517,085	45,059,950
Total number of accidents	706	789	842
Miles flown per accident	56,828	52,620	53,515
Total number of fatal accidents	81	60	72
Miles flown per fatal accident	496,718	691,951	625,833
Total number of pilot fatalities	67	48	58
Miles flown per pilot fatality	600,510	864,939	776,896
Total number of passenger fatalities	49	41	44
Miles flown per passenger fatality	821,106	1,012,612	1,024,090
Total number of all fatalities	124	98	107
Miles flown per fatality	324,469	423,644	421,121

¹ Includes fatalities to pilots, copilots, students, passengers, aircraft crew, ground personnel, and spectators.

NEW WAE UNIFORMS

Light Grey Outfits for Station and Flying Personnel

Los Angeles, Nov. 3—All station and flying personnel of Western Air Express were recently equipped with new light grey uniforms.

The cap of the uniform has a removable top, visor of dull black leather and chin straps of chromium metal mesh. Shirts are of a light grey heavy poplin with two breast pockets with flaps. The tie of four-in-hand is made of legion blue silk. Socks must be plain black and shoes smooth black leather. The coat is military in character. Three buttons down the front of the coat and the four buttons on the pockets are of metal and bear the WAE indian head insignia.

Four stripes of one-half inch braid will indicate a first pilot or captain and three stripes a first officer or second pilot.

Causes of the accidents during the first half of 1937 were divided as follows:

Personnel errors	51.33%
Power plant failures	13.78
Airplane failures	9.82
Weather	8.03
Darkness08
Airport (water or terrain) ..	12.68
Other causes	4.04
Undetermined24

100.00%

A detailed statement of miles flown per accident and fatality follows:

	January-June 1935	January-June 1936	January-June 1937
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Bostonian Flies "Free Air Express" With Cub to Get Transport Rating

Hats off to Murray Carney for contributing a realistic and practical approach toward obtaining a transport pilot's rating.

Murray is the son of Mr. and Mrs. Martin A. Carney, of Walnut Street, Dedham, Mass., near Boston. He obtained his private license about a year ago after training at the E. W. Wiggins Airways base at Norwood, near his home.

After getting his private license, he decided that he definitely wished to follow flying for a career, but couldn't see just circling an airport up to 200 hours to get his transport rating. So, according to Fred Tobey, of Wiggins Airways, "he conceived quite an idea."

Carney bought a Cub, had "Taylor Cub Express" painted on the side of it and now whenever an order for an airplane part comes into Wiggins Airways, Carney loads it into his express plane at once and is off. It doesn't matter what kind of part it is, from a cotter pin to a landing wheel, and the Wiggins Company gets orders from over a wide area of states. Carney will deliver a lock-washer anywhere in the eastern United States—at no charge.

Carney's "Taylor Cub Express" service is, of course, entirely non-commercial. It's his plane and he pays all the expenses. But it gives him an incentive to do the type of flying that will be invaluable experience for him



Murray Carney

when he gets his transport and goes hunting for a real job.

Just twenty years old and a graduate of St. John's Preparatory School in Danvers, Mass., Carney has 150 hours to his credit. To date his longest "express" flight has been to New York City, but he's only been at this gratis delivery service a few weeks.

Lighter Regulations for Washington Airport; Blimp Hangar Fight Starts

With the announcement Nov. 15 of new regulations governing operations at Washington-Hoover Airport, the Capital's 11-year airport fight has moved back where it was before the Air Line Pilots' July ultimatum that stiffer restrictions be enforced or the field be closed. To further complicate matters, a scrap is under way between the Virginia State Corporation Commission and the Goodyear-Zeppelin Company over removal of the company's blimp hangar at the airport.

The Airline Pilots' Association has lodged another protest, signed by 100 pilots using the field, with Fred D. Fagg, director of the Bureau of Air Commerce, over the new regulations.

Although the new rules for the first time restrict Boeing 247-Ds to some extent, limitations on DC-2s and DC-3s are lifted. Boeings may use the short runway 24 hours a day but may not take off if the wind velocity is less than 15 miles per hour. Formerly, Douglas transports weighing more than 15,000 pounds could not use the short runway, but under the new rules DC-2s whose gross weight is under 17,000 pounds, and DC-3s under 22,000 pounds may use this runway.

The old rules also prohibited use of the long runway if the cross-wind was more than 10 miles per hour, stating that planes should land at Bolling Field, the Army's airport. This figure has now been raised to 15 miles per hour.

The Virginia State Corporation Commission on Oct. 25 charged that the Goodyear-Zeppelin blimp hangar, allegedly called a "mental hazard" by some pilots, had been erected without obtaining a permit from the Commission.

Rule 27 of the Commission states

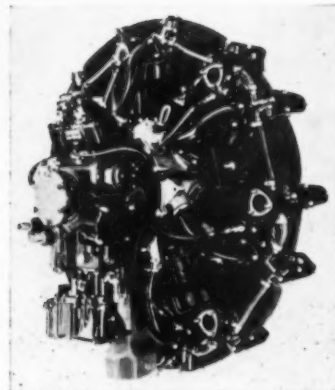
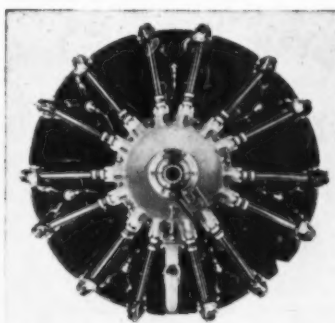
that: "When a license shall have been granted by the Commission for operation of any airport or public landing field, no major changes or alterations in or on such airport, as licensed, shall be made until full details of the location and nature of the change shall have been filed with the Commission and permission obtained from said Commission for such major change."

The humorous side of this situation is the fact that although the blimp ticket office, the government post office and an addition to the administration building, in addition to the hangar itself, were erected without securing building permits, the airport is recognized as being fully licensed.

R. E. Steele, director of aviation for Virginia, on Oct. 25 presented letters to the Commission from airlines, calling the hangar a hazard. Nov. 30 was set as the date for the hearing.

Karl Lange, manager of the hangar, claims that the Commission is using the lack of a permit to get around the Goodyear-Zeppelin Company's five-year contract, which does not terminate until 1939. He stated that with the uncertain status of the airport, it would not be a sound financial move for his company to tear down a \$35,000 hangar. If the government should take over the field and decide that the hangar must come down in the interests of safety, the company would be glad to comply, he said. He pointed out that if the Commission ruled that the hangar must be removed while the airport is still privately-owned, the investment might be completely lost because there is always the possibility that the airlines might transfer operations to Bolling.

Lange stated that by written agreement, the sight-seeing blimp gives way



At top, front view of the new Lycoming R-530-D series 7-cylinder engine, showing the closely-fitted cylinder air baffles and the depth of cylinder fins which provide over 70 square feet of cylinder cooling surface for this 190-220 h.p. engine. Below is three-quarter rear view showing drain lines for automatic valve gear lubrication and location of accessory drives on rear crankcase.

to the airlines at all times, sometimes losing 20 to 30 minutes per flight while transports are landing or taking off.

According to measurements which Lange made, there are much worse hazards at the field than the hangar. His altimeter shows that the Arlington Towers are 950 feet above field level, while there is also a 125-foot chimney and a 175-foot water tower. The hangar is 65 feet high.

WAE Reward Paid

Salt Lake City, Nov. 18—District Judge Herbert M. Schiller recently ordered the county clerk to pay Emery Andrews, Melvin Devey, Frank Bateman and William Healey the \$1,000 reward posted by Western Air Express for finding its plane lost last Dec. 15. The airline had deposited the reward with the county clerk and asked to be released from defending the suit. It was stipulated that the reward should be paid by the county clerk in accordance with the findings of the jury and court.

Air Corps Asks Bids

Dayton, Ohio, Nov. 18—Army Air Corps officials at Wright Field here are asking for bids on a two-engined light transport plane. Bids call for quantities of from one to 50 planes and will be opened Feb. 8, 1938. Bids will be opened on Dec. 28 at Wright Field for two-engined cargo transports. Quantities of from one to 100 planes are asked. Another proposal, to be opened Feb. 24, 1938, calls for prices on from 10 to 50 short range amphibians.

SEVEN-CYLINDER LYCOMING SERIES

New Radial, Air-Cooled Engines Announced as Ready For The Market

The Lycoming Division of Aviation Manufacturing Corporation has announced a new series of seven-cylinder, radial, air-cooled engines based on the design features of the Lycoming R-680 nine-cylinder engines. These new engines, according to George J. Brew, sales manager, are immediately available to the domestic and export market.

Known as the R-530-D Series, the new engines are approved by the Department of Commerce for the following sea-level ratings. With a 5.5 to 1 compression ratio and using 73 octane fuel, the Model R-530-D2 engine has a normal rating of 190 horsepower at 2100 R.P.M. and a take-off rating of 210 horsepower at 2300 R.P.M. With a 6.5 to 1 compression ratio and using 80 octane fuel, the Model R-530-D1 engine has a normal rating of 200 horsepower at 2100 R.P.M. and a take-off rating of 221 horsepower at 2300 R.P.M.

Incorporated in the new series engines are new features and refinements recently provided on Lycoming nine-cylinder engines, notably: completely automatic valve gear lubrication, greatly improved cylinder cooling, and provisions for standard accessory drive equipment.

Completely automatic valve gear lubrication is provided by pressure engine oil which is metered through the cam followers and push rods to the rocker arm bearings. The complete elimination of manual lubrication now permits operators of Lycoming engines to fly 100 hours without maintenance attention to their engine.

Improved cylinder cooling is made possible by the use of longer and more closely-spaced cooling fins which provide the cylinder heads with more than twice as much cooling surface as had been available on earlier models. Approximately 20 square inches of cylinder fin area per cubic inch displacement is presented to the air stream—a total of more than 10 square feet per cylinder. This achievement, together with new, closely-fitted cylinder air baffles and rear exhaust ports, permits operation at considerably lower temperatures with more uniform cylinder cooling under all operating conditions.

Complete details may be obtained from the Lycoming Division, Williamsport, Pa.

Personals

J. Willard Miller, former Cub distributor in Pennsylvania, has been appointed factory representative to cover the eastern seaboard. Robert Jenkins is the new factory representative for Taylor Aircraft west of the Mississippi.

Lieut. Jack T. Jefford, U. S. Army Air Corps Reserve, has joined the Minow Airways, Nome, Alaska, as pilot.

A. M. Alcorn, Bureau of Air Commerce inspector in the Oklahoma district, has been promoted to the government's aircraft engineering service on the west coast. He will spend much of his time in Seattle, Wash.

Miss La Vetta O'Connell and Frank H. Shaules, both employed by Northwest Airlines, were married in Spokane, Wash., last month. Miss O'Connell worked in the company's St. Paul office and Shaules is field representative, located in Spokane.

Miss Margaret Trimble, United Air Lines' hostess, and Louis Jorgensen, University of Maryland medical student, were married in Baltimore in November.

Charles R. Bennett, Bureau of Air Commerce inspector, has been appointed aeronautics inspector in Alaska. He will assist Hugh Brewster, chief inspector for Alaska.

BOEING QUARTERLY PROFIT IS \$121,546

Profit for Nine Months is \$375,443, Considerable Increase Over Same Period of 1936

Seattle, Nov. 10—Boeing Airplane Co. and subsidiaries report a net profit of \$121,546 for the quarter ended September 30, 1937, equal to 17 cents a share on 695,653 shares of \$5 per capital stock. This is after depreciation and federal income taxes. No provision was made for undistributed profits.

For the second quarter of 1937, Boeing showed a net profit of \$137,960 or 24 cents a share on 573,300 shares and for the September quarter of 1936 reported \$39,289 or seven cents a share on 521,882 shares.

Profit for the first nine months of this year is \$375,443, equal to 54 cents a share, comparing with \$131,712 or 25 cents a share for the first nine months of last year.

The income account for the September quarter compares as follows:

	1937	1936
Sales, oper. rev. and other income	\$1,634,595	\$333,566
Costs and other deduct	1,459,662	271,500
Depreciation	29,062	17,736
Federal income taxes	24,325	5,041
Net profit	\$121,546	\$39,289

	1937	1936
Sales, oper. rev. and other income	\$5,040,231	\$1,786,734
Costs and other deduct	4,507,467	1,566,885
Depreciation	88,167	61,256
Federal income taxes	69,154	26,881
Net profit	\$375,443	\$131,712

Stearman Aircraft and Boeing Aircraft, subsidiaries of Boeing Airplane Co., report that they have completed a major portion of the year's delivery scheduled during the first nine months.

Foreign orders for training planes have been almost completed by Stearman and the company is beginning deliveries of trainers on its new U. S. Army Air Corps contract. Boeing Aircraft has completed deliveries to the Army Air Corps on its contract for 13 "Flying Fortresses" and next year will begin deliveries of new four-engined commercial planes for airline service and additional "Flying Fortresses" for the Army.

Northrop Gets Army Order of \$654,155

Northrop Corp., wholly-owned subsidiary of the Douglas Aircraft Company, has received a War Department contract for 29 model A-17-A attack planes to cost \$654,155.90. Similar aircraft are now being built for the Army by Northrop.

The A-17-A is a low-wing monoplane, carrying pilot and gunner, and cruises at 220 miles per hour, maintaining that speed for eight hours. The government furnishes the Pratt and Whitney two-row 750 horsepower engine. The plane carries four fixed .30 caliber guns and one flexible .30 caliber gun. It is designed to house 20 small bombs internally or four large bombs swung outside.

ATC For Lockheed

Burbank, Calif., Nov. 12—Hall L. Hibbard, chief engineer of the Lockheed Aircraft Corp., announced last week that the new Lockheed "14" has been granted an Approved Type Certificate by the Bureau of Air Commerce. The transport has been undergoing tests for the past two months.

Air Associates Plans to Merge With Nicholas-Beazley, Nearest Competitor

Air Associates, Inc., announced on November 12 that an agreement has been signed by the officers of Air Associates and Nicholas-Beazley Airplane Co., Inc., looking toward a merger of the two companies through an exchange of stock in the ratio of one share of Air Associates, Inc., common stock for five shares of Nicholas-Beazley Airplane Co. common.

Nicholas-Beazley stockholders were to vote on this plan at a meeting on November 29.

The merger would bring together the

two largest distributors of aircraft material and accessory equipment in the United States, Air Associates having led the field for some years with Nicholas-Beazley second. Net sales for Air Associates were approximately \$1,440,000 for the year ending Sept. 30, 1937.

Air Associates has headquarters at Garden City, L. I., with offices and warehouses at Chicago and Los Angeles. Nicholas-Beazley has headquarters at Marshall, Mo., with branches at New York, Dallas and Los Angeles.

NATIONAL AIRLINE FILES WITH S. E. C.

Registers 130,000 Shares of New Stock Issue at \$1. Par, Buys Equipment

National Airlines, Inc., of St. Petersburg, Fla., has filed a registration statement with the Securities and Exchange Commission covering 130,000 shares of \$1 par common stock. The issue became effective Nov. 30.

One hundred thousand shares of the issue will be sold by the company at \$3.75 each. G. T. Baker, president, director and chief executive officer, and R. U. Baker, vice president and director, will offer the other 30,000 shares at the same price. An underwriter will be named by amendment.

The company expects to raise \$300,000 from the issue. These proceeds will be used as follows:

Payment of two new planes, ordered	\$111,706.10
Payment of two new engines, to be ordered	12,000.00
Engine parts, to be ordered	3,757.77
Airplane parts, to be ordered	15,000.00
Tools and equipment	7,500.00
One new plane	55,803.00
Radio equipment	5,000.00
Working capital	89,233.13

G. T. Baker, president, receives a salary of \$12,500 a year; R. U. Baker, vice president, \$2,500 a year, and D. G. Bash, treasurer, \$2,600 a year.

On July 11, 1937, the company owned aircraft and equipment with a book value of \$32,772.89, worth \$25,566.18 after depreciation.

National Airlines operates a passenger, mail and express service between Daytona Beach, Fla., and Miami via Orlando, Lakeland, Tampa, St. Petersburg, Sarasota and Fort Myers.

\$60,956 Kinner Corp. Loss For Nine Mos.

Los Angeles, Nov. 18—The Kinner Airplane and Motor Corp., Ltd., reports a net loss of \$60,956 for the nine months ended Sept. 30, 1937, compared with a net loss of \$97,254 for the

The company has discontinued the manufacture of airplanes and is negotiating sale of Approved Type Certificates, equipment, designs and inventory of the airplane division.

Kinner Corporation's indebtedness to the RFC on Sept. 30 was \$96,715 but since then has been reduced to \$89,940, compared with \$133,178 on Sept. 30, 1936. Other indebtedness as of Sept. 30 was \$33,755, compared with \$121,674 last year.

Fifty-seven engines were delivered by the company during the first nine months of this year, compared with 39 during the same period last year. Total sales amounted to \$142,943 against \$83,658 for the first nine months of 1936.

CONTRACTS

The Department of Labor announced the following contracts, amounting to \$626,785.79, signed during the week ended Nov. 13 by various government agencies:

American Gas Accumulator Co., Elizabeth, N. J., lamp assemblies, Army Air Corps, \$20,800.00.

United Aircraft Corp., Chance Vought Aircraft Division, E. Hartford, Conn., airplane parts, Navy, \$14,713.89.

Pioneer Instrument Co. Inc., Brooklyn, N. Y., compass assemblies, Army Air Corps, \$57,809.90.

Kollsman Instrument Co. Inc., Brooklyn, N. Y., altimeter assemblies, Army Air Corps, \$174,200.00.

Pioneer Instrument Co. Inc., Brooklyn, N. Y., indicators, Army Air Corps, \$82,291.50.

Kollsman Instrument Co. Inc., Brooklyn, N. Y., indicators, Army Air Corps, \$119,190.00.

Weston Electrical Instrument Corp., Newark, N. J., indicator assemblies, Army Air Corps, \$26,450.00.

Manning, Maxwell & Moore, Inc., Bridgeport, Conn., gage units, Army Air Corps, \$47,310.50.

Sweebrock Aviation Co., Fort Wayne, Ind., target assemblies, Army Air Corps, \$64,880.00.

Eclipse Aviation Corp., E. Orange, N. J., regulator assemblies, Army Air Corps, \$19,140.00.

Contracts

The Department of Labor announced the following contracts amounting to \$143,878.80, signed during the week of Nov. 18 by various government agencies:

Scintilla Magneto Co., Inc., Sidney, N. Y., engine equipment, Army Air Corps, \$10,636.50.

Abrams Aerial Survey Corp., Lansing, Mich., aerial photographs, War, Engineer, \$21,590.00.

Curtiss-Wright Corp., Curtiss Airplane Division, Buffalo, N. Y., airplane parts, Navy, \$54,951.67.

Smith Engineering & Construction Co., Pensacola, Fla., asphalt material, Pensacola Air Station, \$12,996.00.

Aero Service Corp., Philadelphia, Penna., aerial survey, Department of Interior, \$13,603.80.

Holmberg Air Mapping Co., Chicago, Ill., aerial survey, Department of Interior, \$11,600.00.

Minnesota Mining & Manufacturing Company, St. Paul, Minn., paper tape, Army Air Corps, \$18,500.83.

Irving's Nine Mos. Sales

Irving Air Chute Company has announced that sales for the first nine months of 1937 totalled \$1,151,329. For the entire year 1936, sales were \$1,345,418.

SPERRY MONOPOLY CHARGED BY FTC

Says Company Lessens Competition by Acquiring Capital Stock of Vickers, Waterbury Co.

The Federal Trade Commission on Nov. 9, issued a complaint against the Sperry Corporation, New York City, a holding corporation, charging that it has violated Section 7 of the Clayton Act by acquiring the capital stock of two competing corporations.

The complaint states that the Sperry Corp., a holding company owning several subsidiary companies which manufacture nautical and aviation instruments, in April, 1937, while owning all the capital stock of the Waterbury Tool Company, Waterbury, Conn., acquired all of the issued and outstanding common capital stock of Vickers, Inc., Detroit, alleged to be a direct competitor of the Waterbury Company.

On April 14, 1937, Vickers, Inc., issued 1,600 additional shares of its authorized common stock. There were then issued and outstanding 9,600 shares of common stock and 5,000 shares of preferred stock. The FTC alleges that through an agreement between Sperry and Vickers, also dated April 14, 1937, Sperry acquired and now owns all issued and outstanding common capital stock of Vickers, Inc., and 4,882 shares of its preferred stock. The Sperry Corp. now allegedly controls the operations of Vickers, Inc., as one of its subsidiaries.

The Waterbury Tool Company and Vickers, Inc., are said to constitute the sole source of supply of hydraulic transmissions, pumps and allied products for use by the United States Navy. Because of this fact, the FTC believes that Sperry, by acquiring the capital stock of both companies, is tending to lessen competition and create a monopoly.

Other subsidiaries of the Sperry Corp. are: Sperry Gyroscope Company, Inc., Sperry Gyroscope Company, Ltd., Ford Instrument Company, Inc., and the Intercontinent Corporation.

Fairchild Profit

Fairchild Aviation Corp. and subsidiaries report a net profit of \$124,827 for the nine months ended Sept. 30, 1937. This is subject to audit and year-end adjustments and is after interest, depreciation and federal income taxes. It is equal to 37 cents a share on 337,032 shares of par \$1 capital stock, comparing with \$25,116, or seven cents a share during the first nine months of 1936. Consolidated unfilled orders as of Sept. 30, last, were \$1,251,256, compared with \$1,050,535 on Jan. 1, 1937.

British Aeronca Folds

London, Nov. 15—The voluntary liquidation of the Aeronautical Corporation of Great Britain, Ltd., manufacturers of the Aeronca, was announced here following action taken at a general meeting of shareholders. The company was formed last year.

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AIRCRAFT SALES 68% AHEAD OF '36

Military Planes Show Biggest Gain As Nine Months' Total Reaches \$80,615,059

Sales of American airplanes, aircraft engines and spare parts totalled \$80,615,059 for the first nine months of 1937, an increase of 68 percent over the \$47,978,661 total for the similar 1936 period, according to a statistical survey released by the Aeronautical Chamber of Commerce.

Military plane sales showed the biggest increase, being 101.4 percent ahead of the first nine months of 1936. The number of military planes sold, less engines, during the first nine months of this year totalled 541, as compared to 534 during a similar period last year. Value increased from \$11,668,791 in 1936 to \$23,498,482 this year.

There were 1,854 commercial planes, valued at \$15,105,485 less engines, sold during the first nine months of 1937, compared to 1,145 planes, valued at \$8,551,786 less engines, during the first nine months last year.

Commercial engine sales amounted to 3,292 units, valued at \$11,337,193, as compared to 1,948 engines, valued at \$6,131,211, an increase of 84.9 percent in value. Military engines totalled 1,495 units, valued at \$11,080,120, as compared to 1,294 engines, valued at \$10,896,448 in the 1936 period, an increase of 1.7 percent.

Deliveries for the first nine months were approximately the same as production for the same period.

The following table shows production and delivery of American airplanes, aircraft engines and spare parts, Jan. 1 to Sept. 30, 1937:

	Production			Deliveries		
	Units	Per Cent		Units	Per Cent	
Commercial Airplanes	1,917	\$15,127,321	18.8	1,854	\$15,105,485	18.8
Military Airplanes	539	23,417,246	29.0	541	23,498,482	29.1
Commercial Engines	3,352	11,338,213	14.0	3,292	11,337,193	14.0
Military Engines	1,490	11,014,857	13.9	1,495	11,080,120	13.8
Airplane Spares		13,368,942	16.6		13,368,942	16.6
Engine Spares		6,224,837	7.7		6,224,837	7.7
	\$80,491,416	100.0		\$80,615,059	100.0	

Nine Months' Earnings of 7 Leading Mfgs. Indicate 80% Gain Over 1936

The nine months' earnings of the seven principal manufacturers in the aircraft and aviation equipment industry indicate that this year's profits are likely to be approximately 80 percent better than in 1936.

It is expected that the combined profits of Aviation Corp., Boeing, Curtiss-Wright, Douglas, Glenn L. Martin, North American Aviation and United Aircraft will hit the \$9,000,000 mark. This will be the highest level in the industry's history. These seven companies for the first nine months of 1937 reported combined profits of \$6,702,466 as compared with \$4,929,703 in the full year 1936.

Fourth quarter deliveries are expected to be slightly ahead of the like 1936 period but the increase will be smaller than during the first nine months be-

\$1,490,972 Order to No. American Aviation

The War Department on November 8 announced that 95 basic combat planes and spare parts of a total value of \$1,490,972.96 had been ordered from North American Aviation, Inc., Inglewood, Calif. The order was placed by taking advantage of an option in a procurement contract now in effect with this company and results in a considerable reduction in the price per plane.

The basic combat plane is a low-wing cabin monoplane, with tubular steel, fabric-covered fuselage and metal wings and stabilizers. It carries a crew of two, has two-way radio and is powered by a Pratt and Whitney single-row radial engine of 550 horsepower, furnished by the government.

Because of its comparatively low landing speed, enabling it to operate from small fields, it is planned to use this ship as a courier plane.

Northwest Purchases 4 More Lockheed 14's

Northwest Airlines has purchased four more Lockheed 14 transports which the airline has named "Sky Zephyrs," according to announcement by Croil Hunter, president.

This brings the number of Zephyrs ordered by Northwest to twelve for its Seattle-Chicago route. Delivery of the additional four transports is scheduled for January. The original order of eight is now being delivered, Northwest having placed the first few of the ships in operation. The four new planes will cost \$350,000.

AVIATION STOCK TRENDS

WEEKLY AVIATION AVERAGES
(1937)



Line Chart Data Supplied by Wyckoff Associates, Inc.
Charts and Comments by Philip P. Friedlander

It appears that the supply of stock around 21 has been too much for the Aviation averages to penetrate, and that, for the moment, we will find lower prices for this group. It would be logical for support to appear around the 15-14 level.

Previously on the big break in the general security markets, the averages went to a low level of 12.66. On this secondary test of the old lows, a higher support would be distinctly bullish. As a matter of fact the Aviation stocks are acting better than the general stock market, and one must feel that on weakness that aviation securities are attractive purchases.

During the past two weeks, support of this group has appeared around 16.50. That this point will be violated before a move forward starts, is a distinct possibility. The volume on the downside has increased slightly, suggesting a retreat. Purchases made on weakness should be protected with stops under the old lows. For if this was

penetrated, 8 would be the next support point. However, it is our opinion that the averages will hold around 14-15. Therefore, advantageous buying opportunities will be presented shortly.

RECORD BACKLOG

L.A. County's Aircraft Orders Total Approximately \$56,500,000

Los Angeles, Nov. 20—There is now a total of approximately \$56,500,000 in unfilled aircraft orders in Los Angeles County, according to a survey just completed by the Chamber of Commerce.

A. G. Arnoll, secretary and general manager of the Los Angeles Chamber, states that a full force of men, working day and night for two years, will be required to fill the orders. It was also shown that Los Angeles County employs around 13,800 men in the airplane industry, compared with 12,970 in the motion picture industry.

LEADING AVIATION STOCKS

New York Stock Exchange

	Week Ending Nov. 13				Week Ending Nov. 20			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aviation Cp. of Del. . .	4	3 3/4	—	9,800	4	3 1/4	— 1/2	9,200
Bendix Aviation . . .	15 1/2	12 1/2	+ 1 3/4	19,100	15 1/2	12 1/2	— 1/2	15,900
Boeing Airplane . . .	24 3/4	20 3/4	+ 2 1/4	21,400	25 3/4	22 3/4	— 1/4	43,900
Consolidated Aircraft . . .	13 1/2	10 3/4	+ 1 3/4	3,300	13 1/2	10 1/2	— 1 1/2	6,900
Curtiss-Wright . . .	37 3/4	33 3/4	+ 1 1/2	19,300	37 3/4	34 3/4	— 3/4	31,500
Curtiss-Wright A . . .	13 3/4	11 3/4	+ 1 1/2	14,600	13 3/4	11 1/4	— 1 1/2	14,400
Douglas Aircraft . . .	36 3/4	30 1/4	+ 5	18,600	36 3/4	30 3/4	— 3	22,600
Glenn L. Martin . . .	14 3/4	12 1/2	+ 1 1/4	4,300	15 1/2	13	— 3/4	9,200
Natl. Aviation Corp. . .	8 3/4	7 1/4	+ 3/4	700	8 1/4	7 1/4	— 1	1,200
N. American Aviation . . .	8 1/4	6 1/4	+ 1 1/4	27,800	8 1/4	6 1/4	— 3/4	25,300
Sperry Corp. . .	14 1/2	12 1/2	+ 1	11,000	14 1/2	12 1/2	— 3/4	15,900
Thompson Products . . .	17 1/2	14 3/4	+ 1 3/4	2,600	16 3/4	13 1/4	— 2 3/4	2,900
TWA . . .	7 3/4	6 1/2	+ 3/4	5,000	7 3/4	6	— 1 3/4	3,800
United Air Lines . . .	9 1/4	8	+ 1 1/2	7,600	9	7 1/4	— 1 3/4	14,700
United Aircraft . . .	20 3/4	16 3/4	+ 2 3/4	29,400	20 1/4	17	— 1 3/4	37,500

New York Curb Exchange

	Week Ending Nov. 13				Week Ending Nov. 20			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aero Supply B . . .	3	2 1/2	+ 1/4	3,100	3 1/4	2 3/4	— 1/4	2,500
American Airlines . . .	14	11	+ 1 1/2	900	12 1/2	10 1/4	— 2	1,700
Beech Aircraft . . .	1 1/2	1 1/4	+ 1/4	700	1 1/2	1 1/4	— 1/4	200
Bell Aircraft . . .	13	11	— 3/4	500	12 1/2	11 1/2	— 1 1/2	1,000
Bellanca Aircraft . . .	3 1/4	3	—	800	3 1/4	2 3/4	— 3/4	700
Breeze Corp. . .	6 1/4	6 1/4	—	300	7	6	— 1	1,200
Brewster Aero . . .	3 1/4	3	— 1/4	1,000	not listed			
Fairchild Aviation . . .	3 1/4	2 3/4	+ 3/4	2,400	3 1/4	2 3/4	— 3/4	2,200
Irving Chute Co. . .	8 1/4	8 1/4	—	100	8 1/4	7 1/2	— 3/4	4,700
Pan American Air . . .	8 3/4	7 3/4	+ 1 1/2	3,800	8 3/4	7	— 1	4,700
Seversky Aircraft . . .	19	17 1/4	+ 1 3/4	2,500	18 1/2	15 1/4	— 1 3/4	5,300
Waco Aircraft . . .	2 1/2	2 1/2	—	800	2	1 3/4	— 1/4	2,300
Western Air Express . . .	4 1/2	3 1/2	+ 5/8	1,100	4 1/2	3 3/4	— 1/2	400

	Third quarter 1937	Third quarter 1936	1st Nine months 1937	1st Nine months 1936	Year 1936
Aviation Corp.*	\$60,475	\$53,374	\$82,681	\$81,586	\$104,016
Boeing	121,546	39,289	375,443	131,712	168,364
Curtiss-Wright	690,987	440,312	1,591,584	1,262,132	1,017,657
Douglas†	326,973	83,032	852,795	277,644	976,342
Glenn L. Martin	492,532		1,018,839		732,652
North American†	160,224	16,544	225,788	137,957	4,230
United Aircraft	1,032,643	364,190	2,720,698	912,750	1,926,442

*1936 profits are for quarter and nine months ended September 30 and 11 months ended November 30. 1937 profits are for quarter and nine months ended August 31. †Fiscal periods ended August 31 and November 30. ‡Loss. §Includes Eastern Air Lines.

AN executive of one of the largest aviation companies in the country was speaking:—

"I am thoroughly convinced that no price of support by the industry would be too high even if *not a single copy* of your magazine circulated outside the city of Washington."

This man was speaking from actual experience—the experience of contacting Government agencies in aviation matters.

"Your magazine has done more to create *issues* of aviation problems in Washington than any other single factor," he went on. "And until aviation problems become *issues* in Washington, the industry can't get to first base. I have found your magazine in every office I have to contact in my particular job—Commerce, Post Office, State Department and the I. C. C. For the first time in memory, Washington officials know that the industry has a voice here—and they are being jerked out of official complacency. For the first time the industry has a medium that reaches the people whose decisions give the stop or go signal to aviation."

This executive knows his Washington. He knows that the future of private flying depends upon the regulations, the stimulation, and the decisions of Washington. He knows that appropriations for Army and Navy contracts are decided upon by a Congress controlled by "the men from the west" who are only reached effectively by a news medium they can read and understand. He knows that Washington holds in its palm the life blood of air transportation. He knows that Washington is the key to airplane sales, airports, military contracts, air mail, private flying—the key to every phase of aviation.

Those of the industry who really know their Washington know the effectiveness of AMERICAN AVIATION's *independent and constructive* voice in Washington.

From the standpoint of advertising budgets alone, the support of AMERICAN AVIATION *is worth the price even if not a single copy circulated outside of the nation's capital.* Here is an example of where advertising makes possible the vast economic returns which the aviation industry so richly deserves and which it *can* have when the men who make the decisions know the industry's problems.